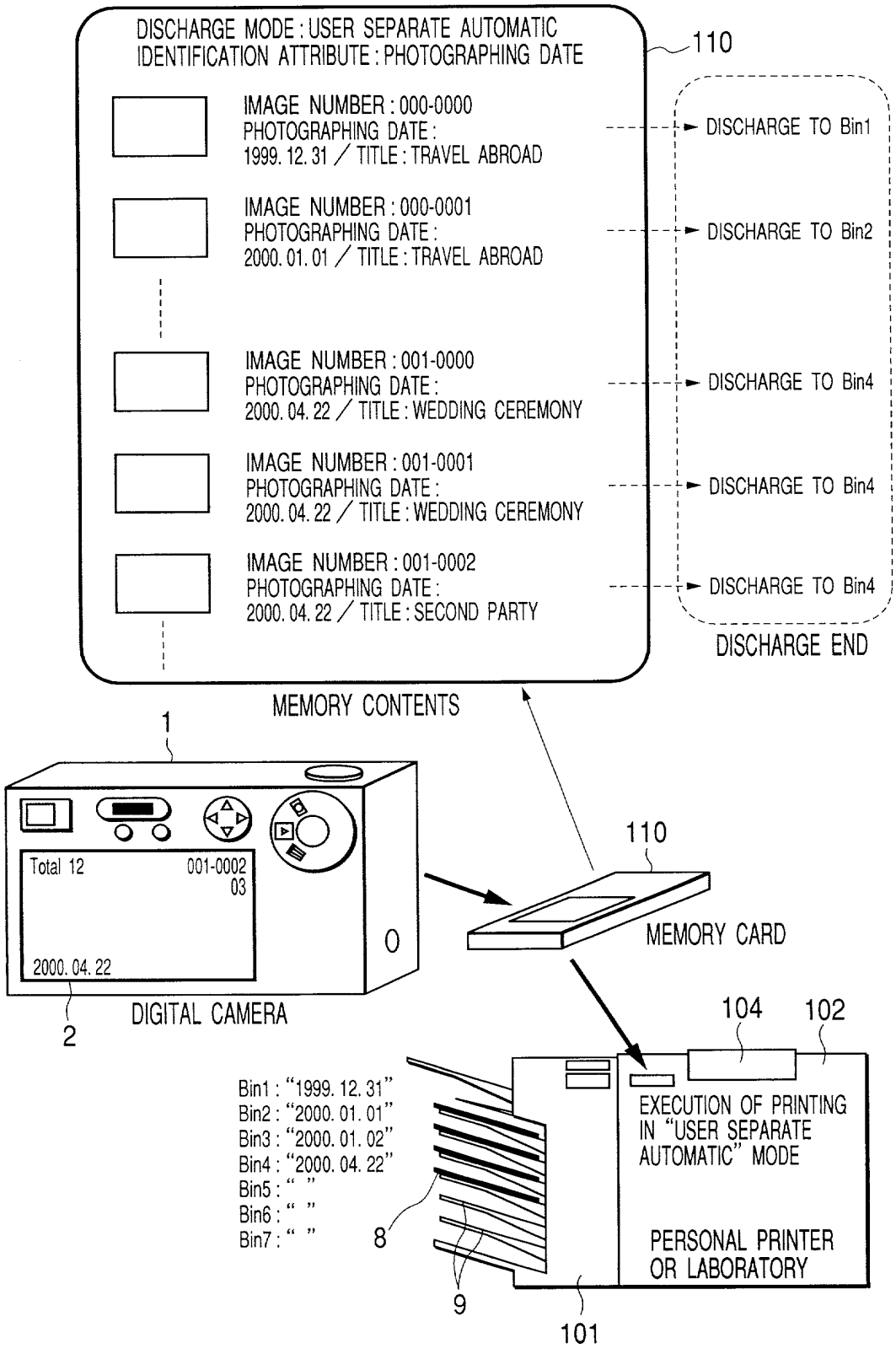
FIG. 1



JP2002-354259A 2002.12.06

FIG. 2

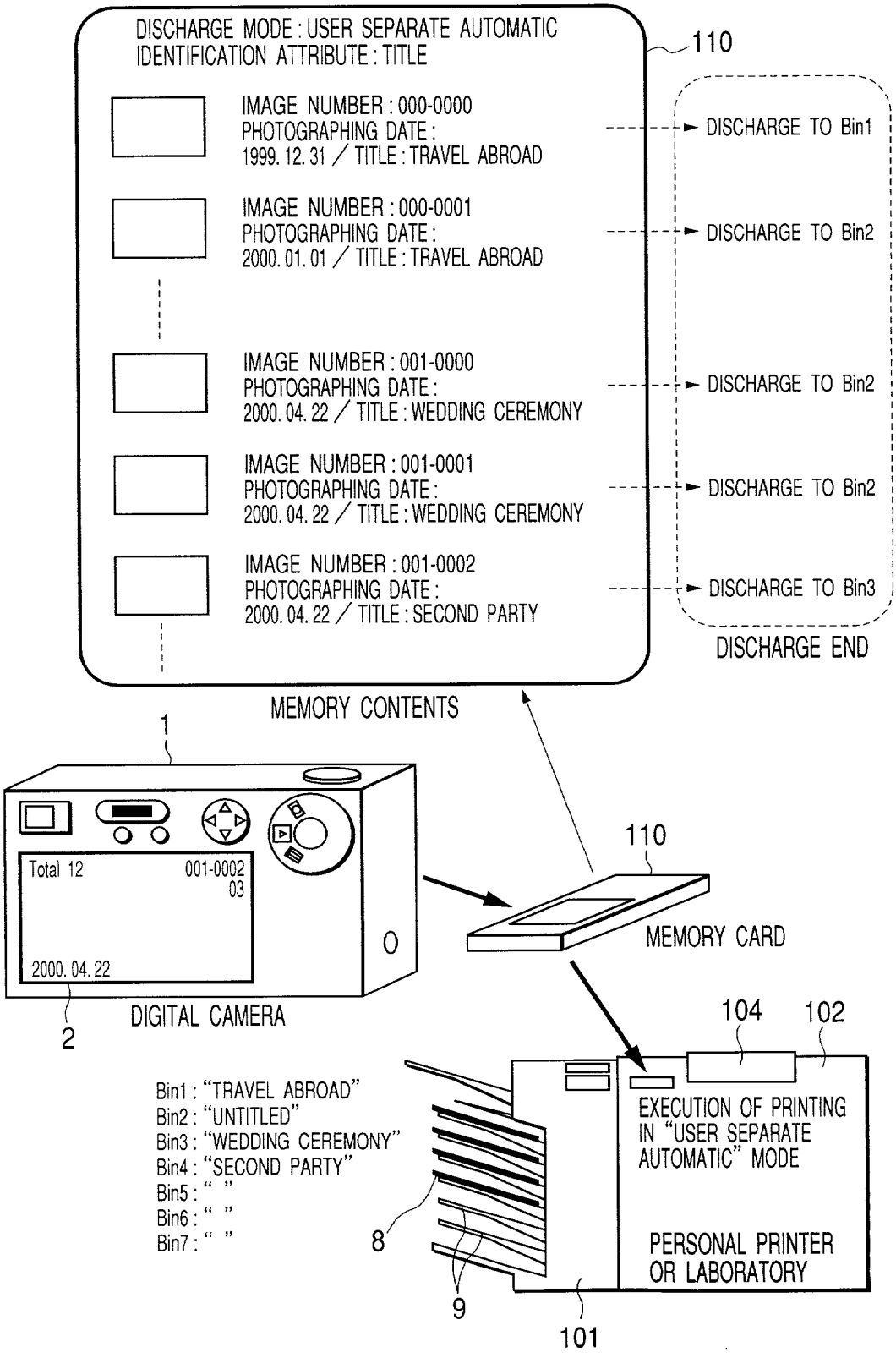

DISCHARGE MODE : USER SEPARATE AUTOMATIC
IDENTIFICATION ATTRIBUTE : TITLE
110
IMAGE NUMBER : 000-0000
PHOTOGRAPHING DATE :
1999. 12. 31 / TITLE : TRAVEL ABROAD
DISCHARGE TO Bin1
IMAGE NUMBER : 000-0001
PHOTOGRAPHING DATE :
2000. 01. 01 / TITLE : TRAVEL ABROAD
DISCHARGE TO Bin2
IMAGE NUMBER : 001-0000
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : WEDDING CEREMONY
DISCHARGE TO Bin2
IMAGE NUMBER : 001-0001
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : WEDDING CEREMONY
DISCHARGE TO Bin2
IMAGE NUMBER : 001-0002
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : SECOND PARTY
DISCHARGE TO Bin3
DISCHARGE END
MEMORY CONTENTS
1
Total 12
001-0002
03
2000. 04. 22
DIGITAL CAMERA
2
110
MEMORY CARD
104
102
Bin1 : "TRAVEL ABROAD"
Bin2 : "UNTITLED"
Bin3 : "WEDDING CEREMONY"
Bin4 : "SECOND PARTY"
Bin5 : " "
Bin6 : " "
Bin7 : " "
8
9
EXECUTION OF PRINTING
IN "USER SEPARATE
AUTOMATIC" MODE
PERSONAL PRINTER
OR LABORATORY
101

FIG. 3

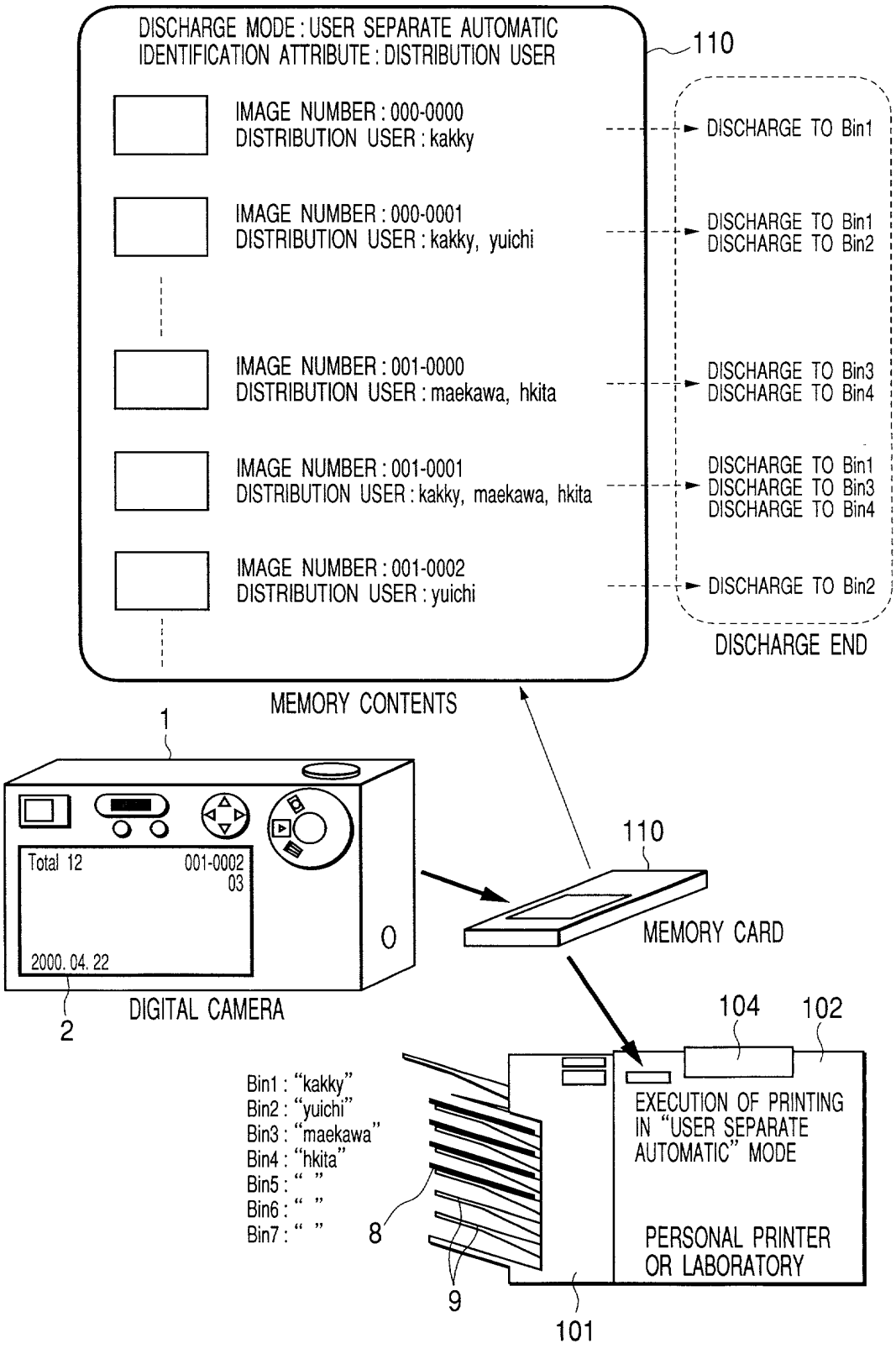

DISCHARGE MODE : USER SEPARATE AUTOMATIC
IDENTIFICATION ATTRIBUTE : DISTRIBUTION USER
110
IMAGE NUMBER : 000-0000
DISTRIBUTION USER : kakky
DISCHARGE TO Bin1
IMAGE NUMBER : 000-0001
DISTRIBUTION USER : kakky, yuichi
DISCHARGE TO Bin1
DISCHARGE TO Bin2
IMAGE NUMBER : 001-0000
DISTRIBUTION USER : maekawa, hkita
DISCHARGE TO Bin3
DISCHARGE TO Bin4
IMAGE NUMBER : 001-0001
DISTRIBUTION USER : kakky, maekawa, hkita
DISCHARGE TO Bin1
DISCHARGE TO Bin3
DISCHARGE TO Bin4
IMAGE NUMBER : 001-0002
DISTRIBUTION USER : yuichi
DISCHARGE TO Bin2
DISCHARGE END
MEMORY CONTENTS
1
Total 12
001-0002
03
2000. 04. 22
DIGITAL CAMERA
2
110
MEMORY CARD
104
102
Bin1 : "kakky"
Bin2 : "yuichi"
Bin3 : "maekawa"
Bin4 : "hkita"
Bin5 : " "
Bin6 : " "
Bin7 : " "
8
9
EXECUTION OF PRINTING
IN "USER SEPARATE
AUTOMATIC" MODE
PERSONAL PRINTER
OR LABORATORY
101

FIG. 4

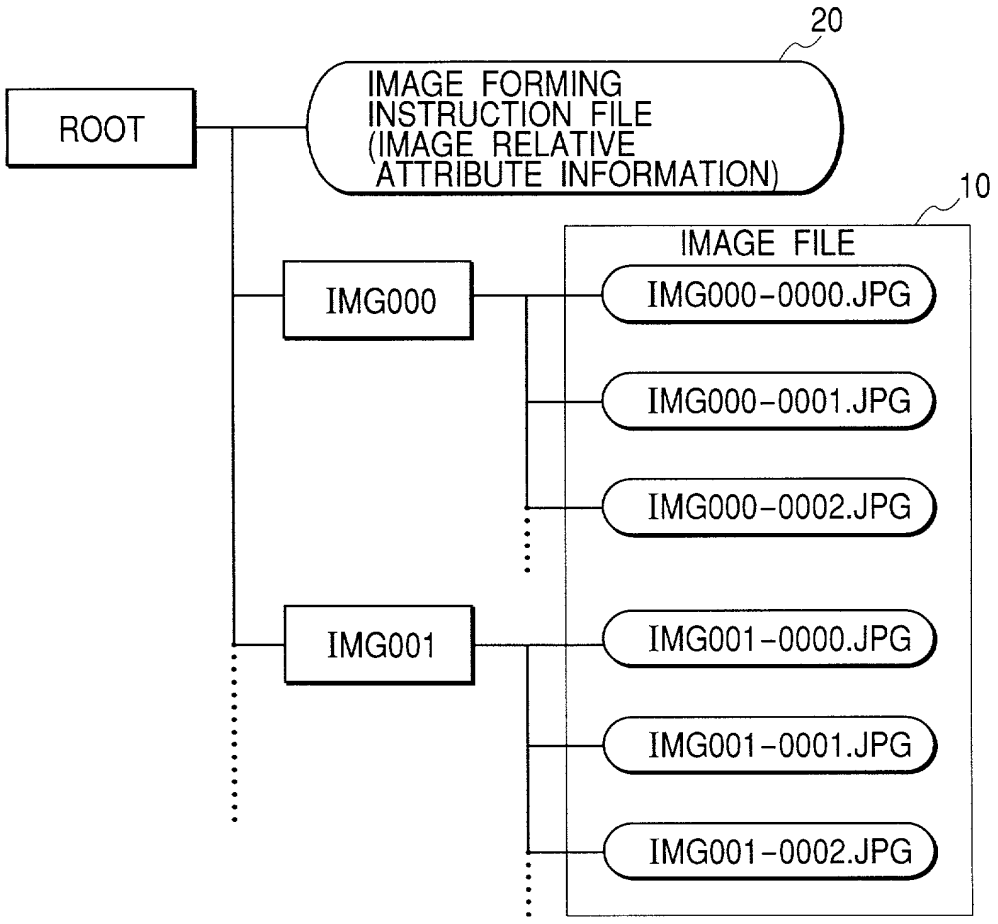
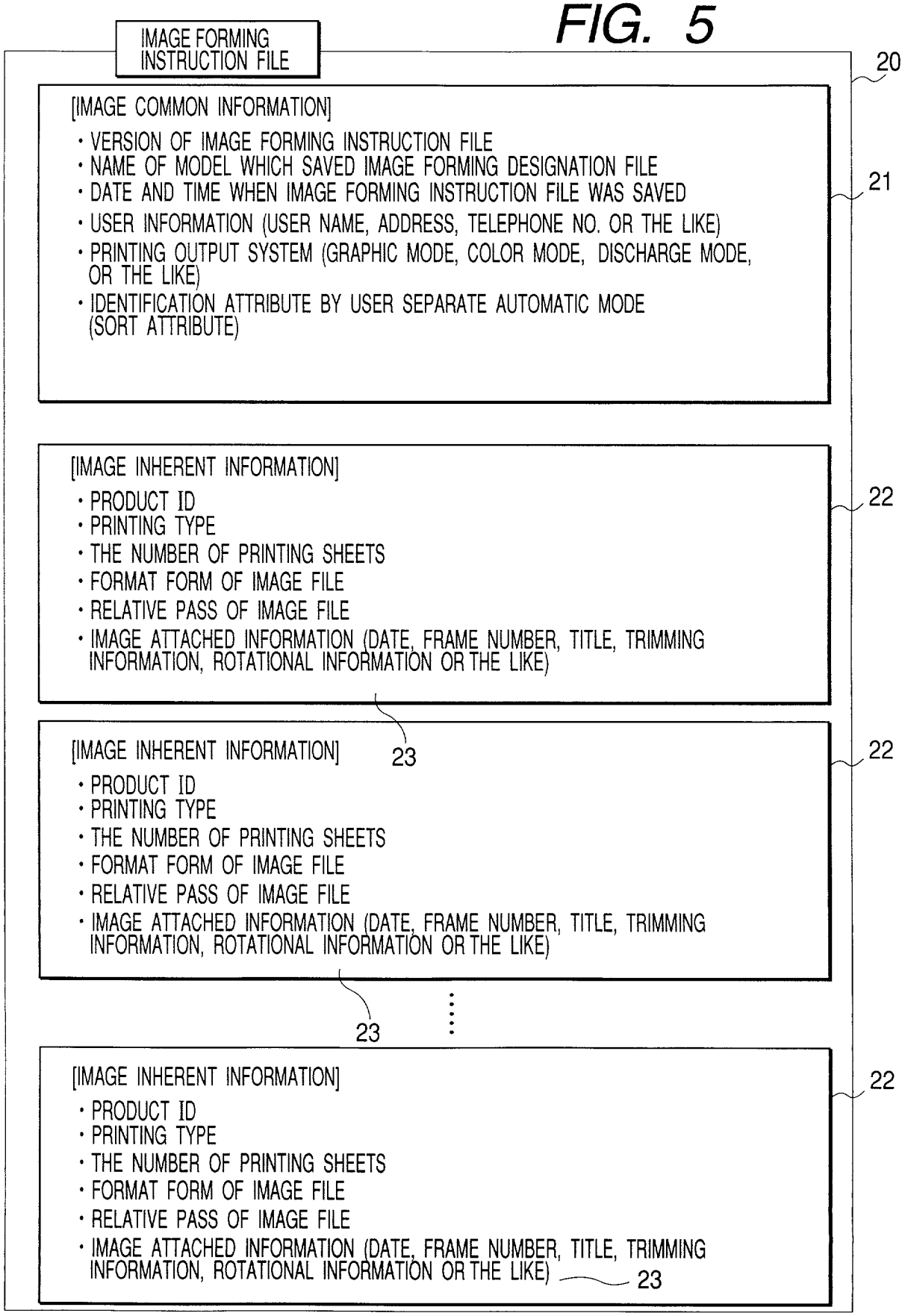

20
ROOT
IMAGE FORMING INSTRUCTION FILE (IMAGE RELATIVE ATTRIBUTE INFORMATION)
10
IMAGE FILE
IMG000
IMG000-0000.JPG
IMG000-0001.JPG
IMG000-0002.JPG
IMG001
IMG001-0000.JPG
IMG001-0001.JPG
IMG001-0002.JPG

FIG. 5



US 2005/0275705 A1

FIG. 6

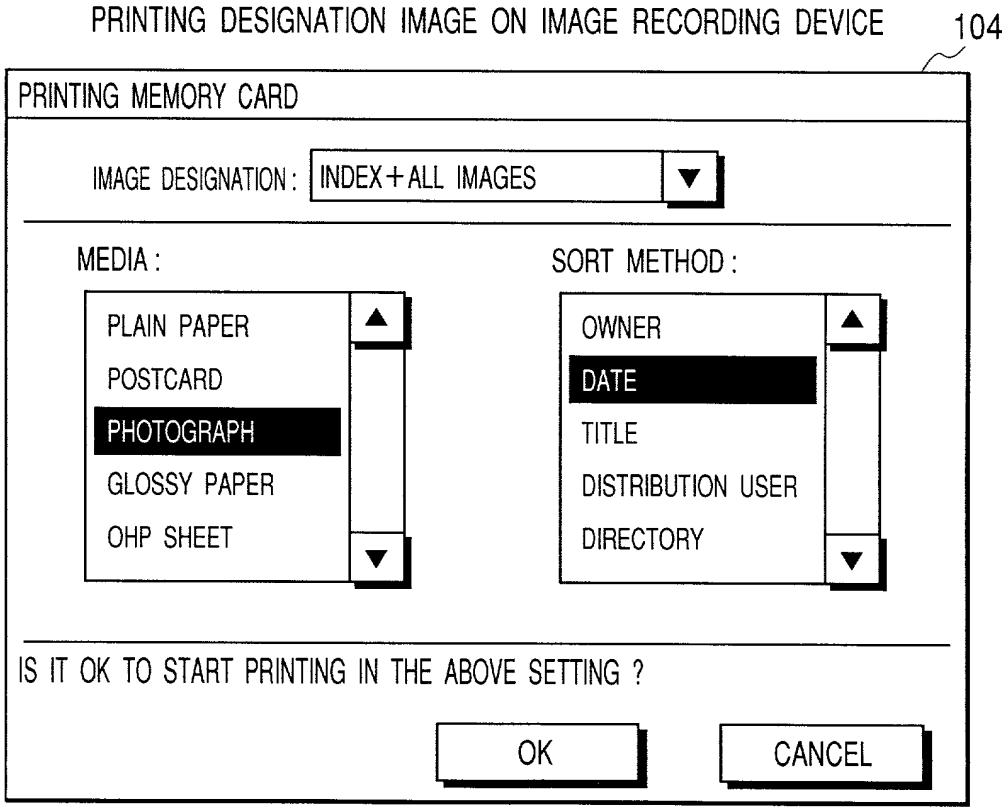


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FIG. 7

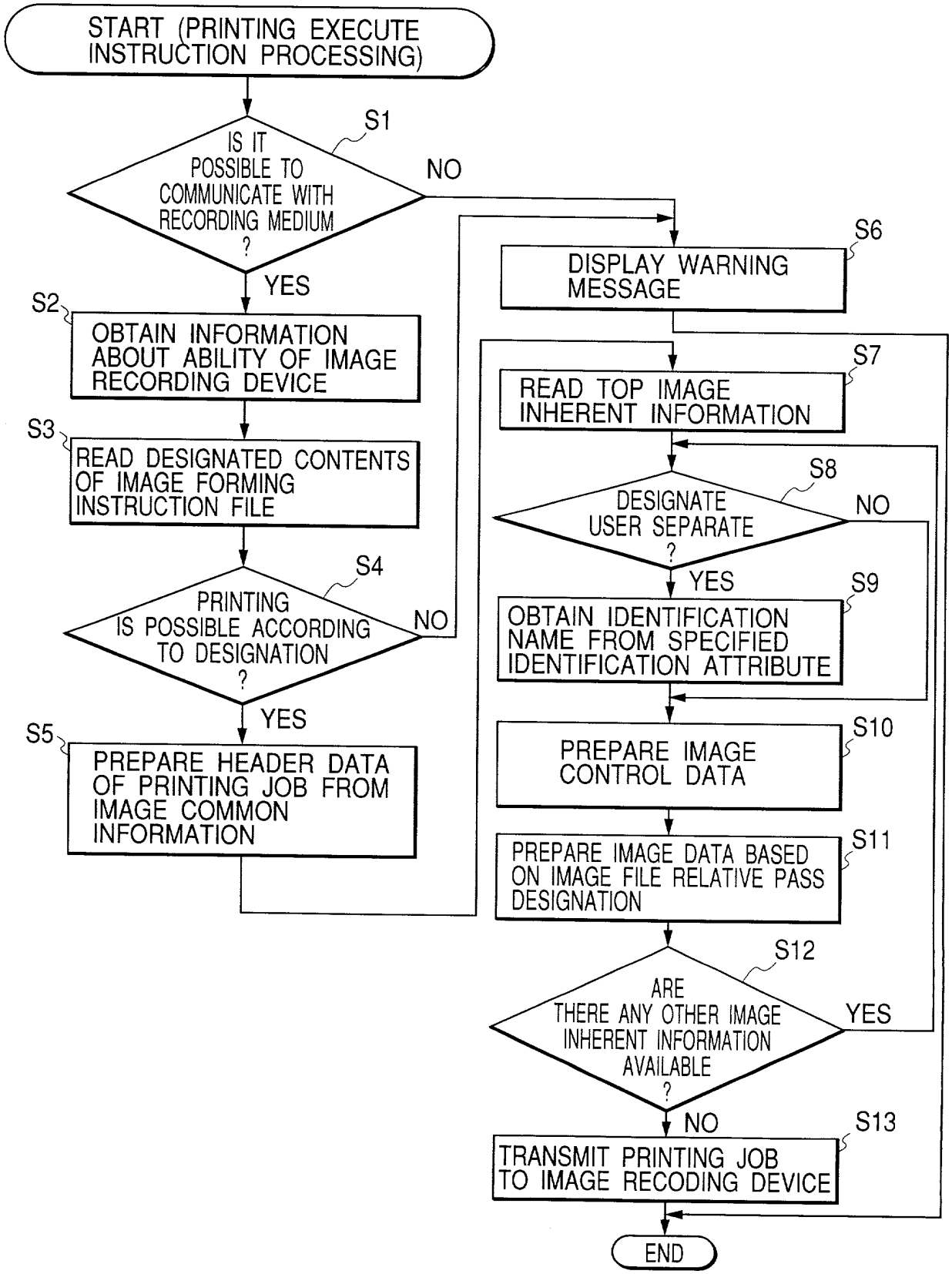

START (PRINTING EXECUTE INSTRUCTION PROCESSING)
S1
IS IT POSSIBLE TO COMMUNICATE WITH RECORDING MEDIUM ?
NO
YES
S2
OBTAIN INFORMATION ABOUT ABILITY OF IMAGE RECORDING DEVICE
S3
READ DESIGNATED CONTENTS OF IMAGE FORMING INSTRUCTION FILE
S4
PRINTING IS POSSIBLE ACCORDING TO DESIGNATION ?
NO
YES
S5
PREPARE HEADER DATA OF PRINTING JOB FROM IMAGE COMMON INFORMATION
S6
DISPLAY WARNING MESSAGE
S7
READ TOP IMAGE INHERENT INFORMATION
S8
DESIGNATE USER SEPARATE ?
NO
YES
S9
OBTAIN IDENTIFICATION NAME FROM SPECIFIED IDENTIFICATION ATTRIBUTE
S10
PREPARE IMAGE CONTROL DATA
S11
PREPARE IMAGE DATA BASED ON IMAGE FILE RELATIVE PASS DESIGNATION
S12
ARE THERE ANY OTHER IMAGE INHERENT INFORMATION AVAILABLE ?
YES
NO
S13
TRANSMIT PRINTING JOB TO IMAGE RECODING DEVICE
END

FIG. 8

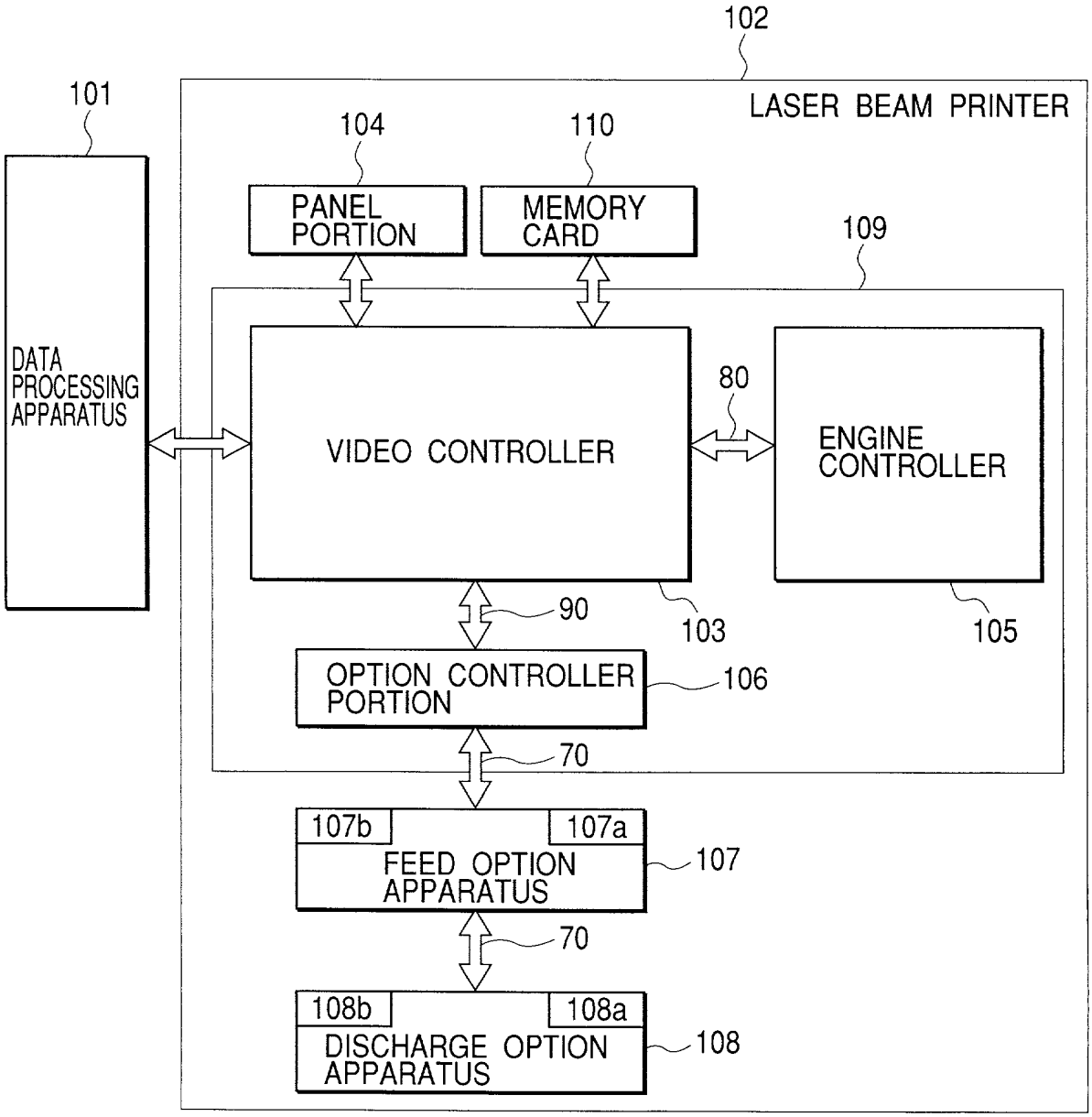

102
LASER BEAM PRINTER
101
DATA PROCESSING APPARATUS
104
PANEL PORTION
110
MEMORY CARD
109
VIDEO CONTROLLER
80
ENGINE CONTROLLER
90
103
105
OPTION CONTROLLER PORTION
106
70
107b
107a
FEED OPTION APPARATUS
107
70
108b
108a
DISCHARGE OPTION APPARATUS
108

FIG. 9

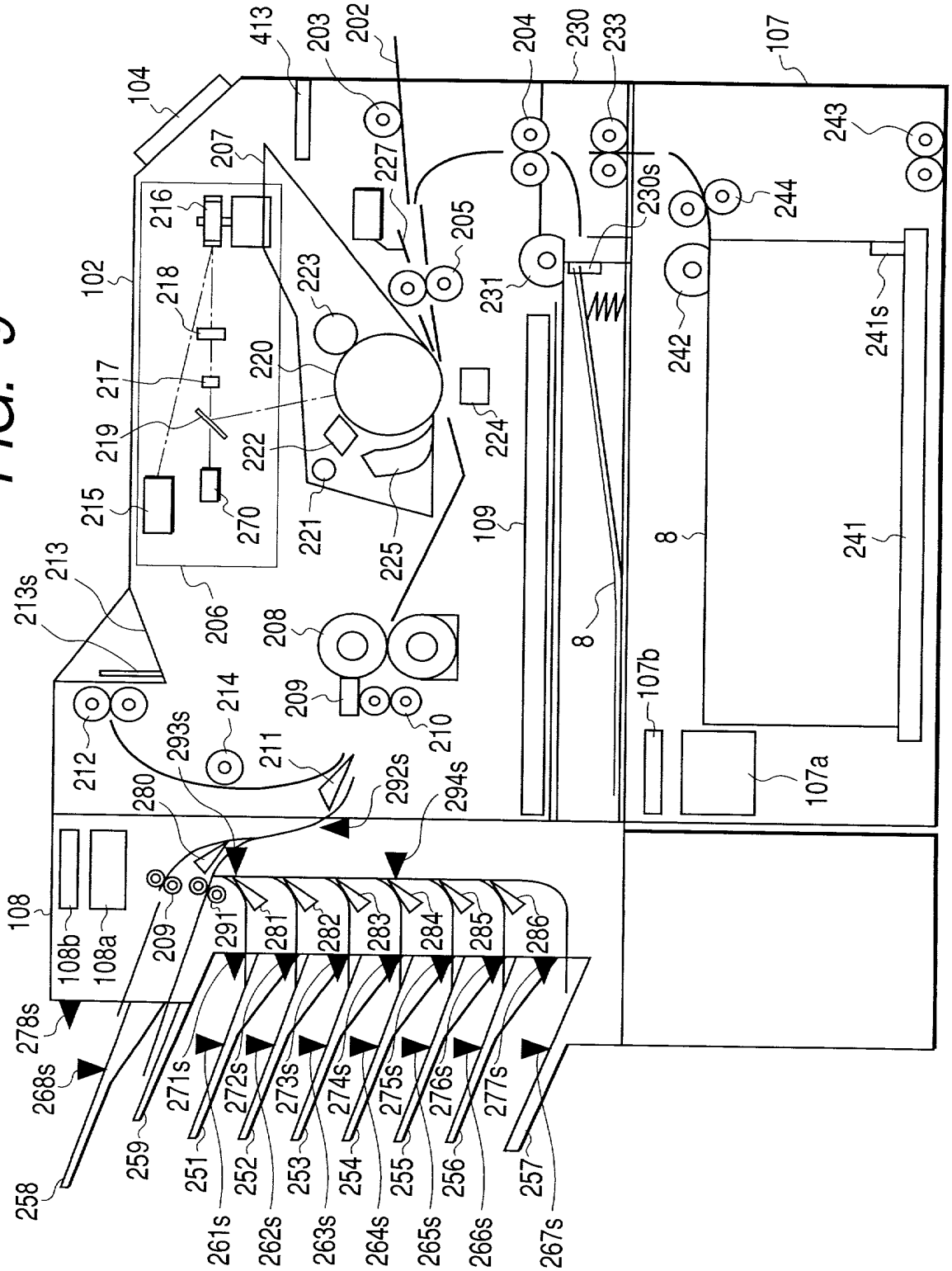

104
413
203
202
204
230
233
107
207
227
243
216
230s
244
102
218
205
223
231
242
241s
217
220
224
219
222
109
241
215
270
221
225
8
213
213s
206
208
107b
214
209
210
212
293s
211
107a
280
292s
294s
108
108b
108a
209
291
281
282
283
284
285
286
278s
268s
271s
272s
273s
274s
275s
276s
277s
258
259
251
252
253
254
255
256
257
261s
262s
263s
264s
265s
266s
267s

FIG. 10

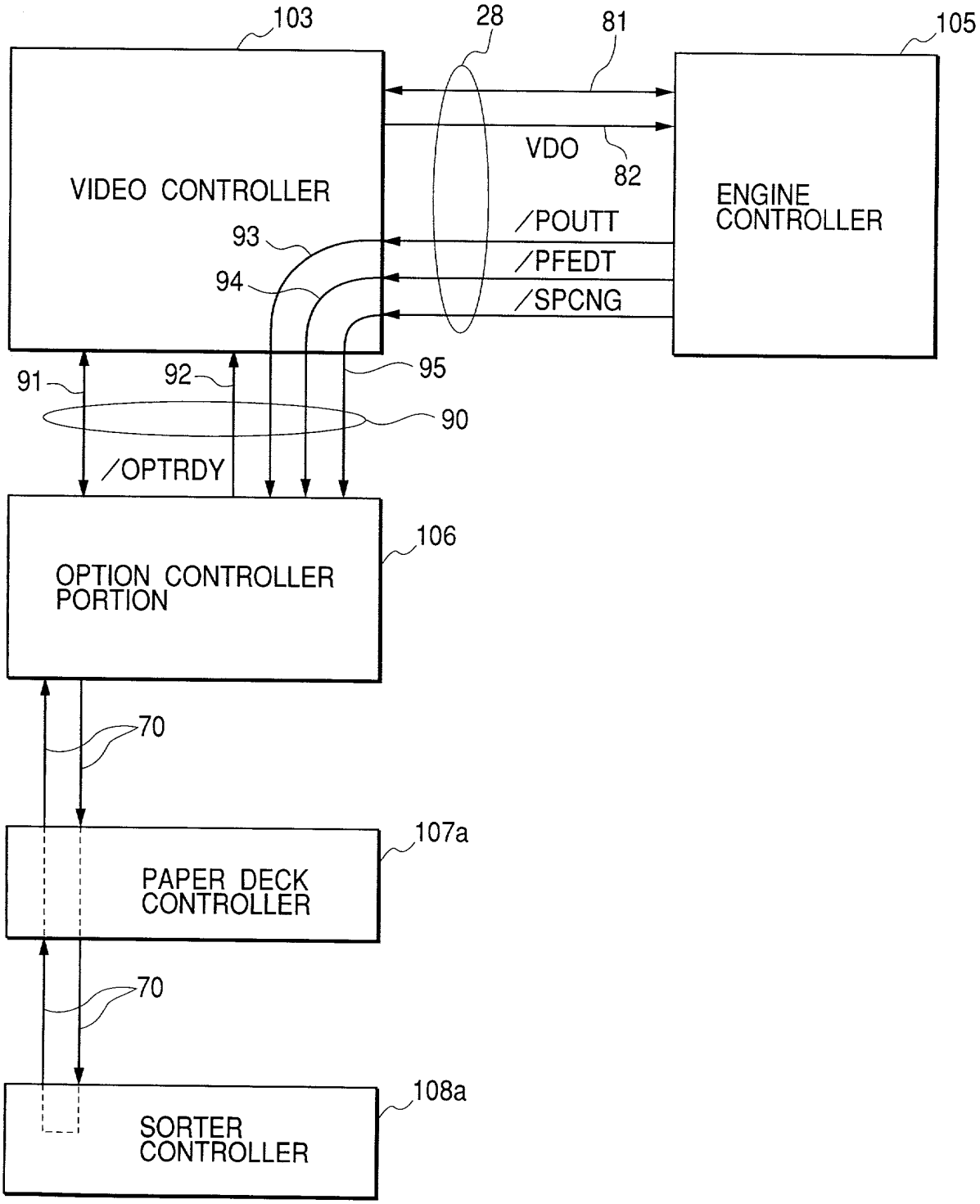

103
28
81
105
VIDEO CONTROLLER
VDO
82
ENGINE CONTROLLER
/POUTT
/PFEDT
/SPCNG
93
94
95
91
92
90
/OPTRDY
OPTION CONTROLLER PORTION
106
70
107a
PAPER DECK CONTROLLER
70
108a
SORTER CONTROLLER

FIG. 11

VC・・・VIDEO CONTROLLER
EC・・・ENGINE CONTROLLER

SIGNAL NAME	DIRECTION	CONTENTS
/CPRDY	VC ⟶ EC	A SIGNAL SHOWING THAT A VIDEO CONTROLLER 103 IS IN A STATUS CAPABLE OF COMMUNICATING WITH AN ENGINE CONTROLLER 105
/PPRDY	VC ⟵ EC	A SIGNAL SHOWING THAT THE ENGINE CONTORLLER 105 IS IN A STAND-BY STATUS CAPABLE OF COMMUNICATING WITH THE VIDEO CONTORLLER 103
/RDY	VC ⟶ EC	A SIGNAL SHOWING THAT THE ENGINE CONTROLLER 105 IS IN A STAND-BY STATUS CAPABLE OF PRINTING
/PRNT	VC ⟶ EC	A SIGNAL FOR THE VIDEO CONTROLLER 103 TO MAKE A REQUEST FOR A PRINTING TO THE ENGINE CONTROLLER 105
/VSREQ	VC ⟵ EC	A SIGNAL FOR THE ENGINE CONTROLLER 105 TO MAKE A REQUEST FOR A VERTICAL SYNCHRONIZING SIGNAL TO THE VIDEO CONTROLLER 103
/VSYNC	VC ⟶ EC	THE VERTICAL SYNCHRONIZING SIGNAL WHICH THE VIDEO CONTROLLER 103 OUTPUTS TO THE ENGINE CONTROLLER 105
/BD	VC ⟵ EC	THE HORIZONTAL SYNCHRONIZING SIGNAL WHICH THE ENGINE CONTROLLER 105 OUTPUTS TO THE VIDEO CONTROLLER 103
/CCRT	VC ⟵ EC	A SIGNAL NOTIFYING TO THE VIDEO CONTROLLER 103 OF A STATUS CHANGE WHEN THE CONTENT OF A STATUS NOT RELATING DIRECTLY TO A RDY SIGNAL HAS CHANEGED AND BECOMES "TRUE"
/SCLK	VC ⟶ EC	A SYNCHRONIZING CLOCK SIGNAL FOR A SERIAL COMMUNICATION
/CMD	VC ⟶ EC	A COMMAND SIGNAL BY WHICH THE VIDEO CONTROLLER 103 INSTRUCTS THE ENGINE CONTROLLER 105
/CBSY	VC ⟶ EC	A STROBE SIGNAL FOR OUTPUTTING A COMMAND
/STS	VC ⟵ EC	A SIGNAL SHOWING A STATUS INSIDE THE ENGINE WHICH IS OUTPUTTED TO A COMMAND FROM THE VIDEO CONTROLLER 103
/SBSY	VC ⟵ EC	A SIGNAL FOR A STATUS OUTPUT

US 6,996,355 B2

FIG. 12

VC・・・VIDEO CONTROLLER
OC・・・OPTION CONTROLLER
EC・・・ENGINE CONTROLLER

SIGNAL NAME	DIRECTION	CONTENTS
SERIAL COMMUNICATION I/F	VC⟷OC	I/F WHICH PERFORMS A FEED DESIGNATION TO A FEED OPTION, A DISCHARGE DESIGNATION TO A DISCHARGE OPTION, A COMMAND DESIGNATION OR THE LIKE THROUGH A COMMON MEMORY
/OPTRDY	VC ← OC	SHOWS A READY STATUS FOR A FUNCTION WITH WHICH A DESIGNATION OPTION APPARATUS IS PROVIDED
/POUTT	EC → OC	A TIMING SIGNAL BY WHICH A PRINTER MAIN BODY DISCHARGES A RECORDING PAPER
/PFEDT	EC → OC	A TIMING SIGNAL BY WHICH THE PRINTER MAIN BODY RECEIVES A RECORDING PAPER FROM AN OPTION UNIT
/SPCNG	EC → OC	A SIGNAL FOR SLOWING DOWN A SPEED OF THE RECORDING PAPER CONVEYED AT HIGH SPEED INSIDE THE POTION APPARATUS AND ADJUSTING IT TO THE CONVEYING SPEED OF THE PRINTER MAIN BODY

FIG. 13

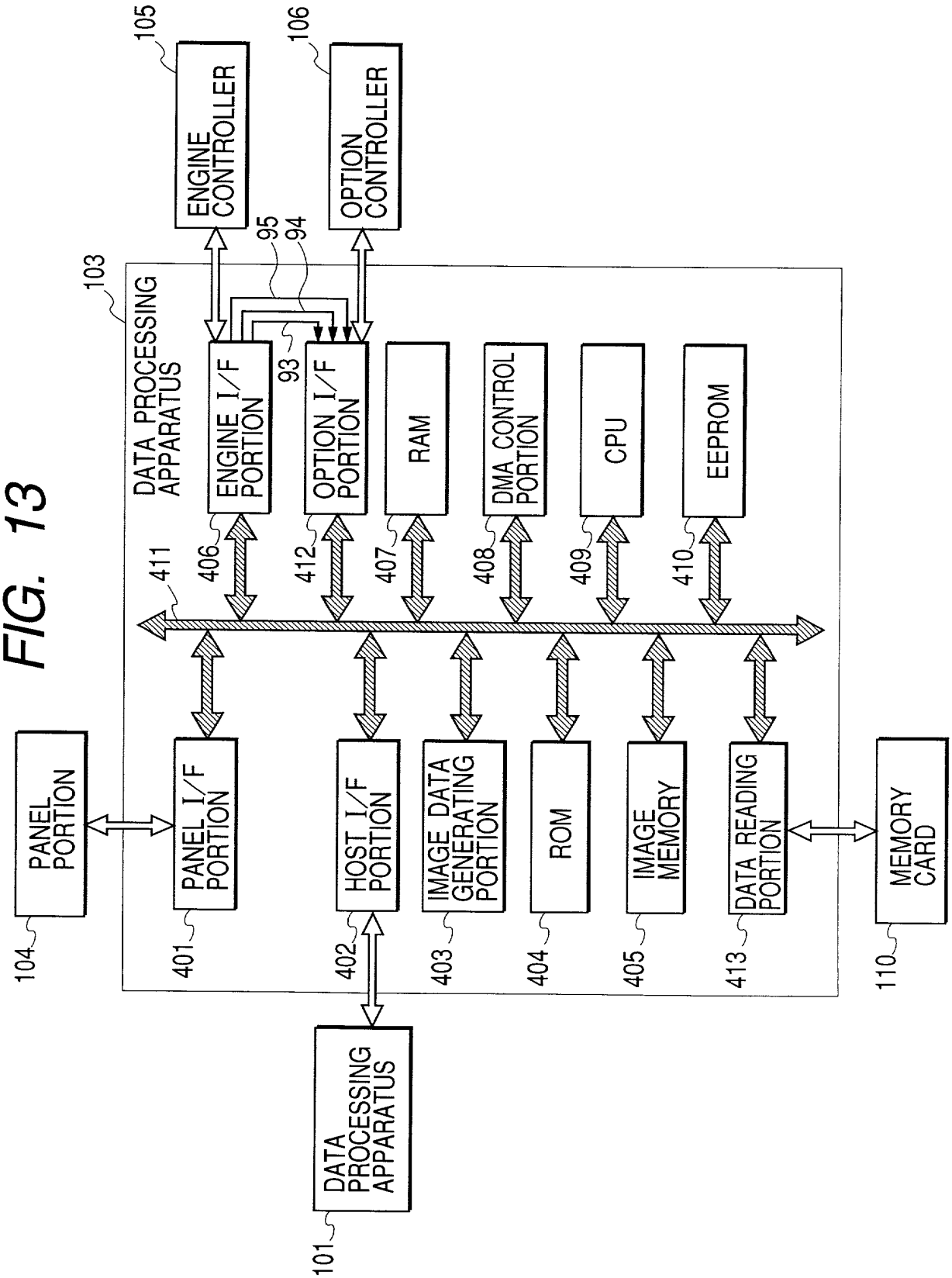

ENGINE CONTROLLER
OPTION CONTROLLER
105
106
95
94
93
103
DATA PROCESSING APPARATUS
ENGINE I/F PORTION
OPTION I/F PORTION
RAM
DMA CONTROL PORTION
CPU
EEPROM
411
406
412
407
408
409
410
PANEL PORTION
PANEL I/F PORTION
HOST I/F PORTION
IMAGE DATA GENERATING PORTION
ROM
IMAGE MEMORY
DATA READING PORTION
MEMORY CARD
104
401
402
403
404
405
413
110
DATA PROCESSING APPARATUS
101

FIG. 14

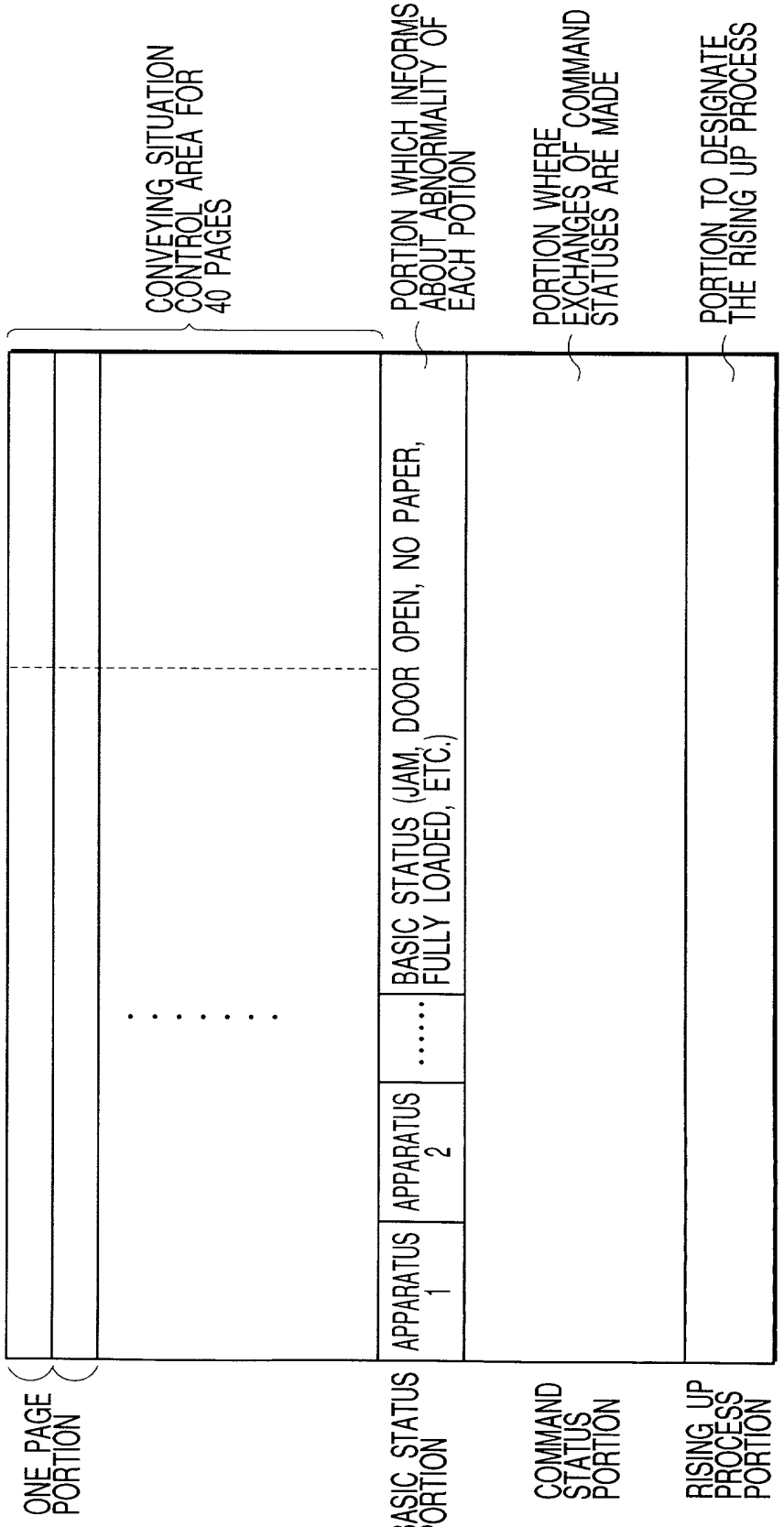

PORTION DESIGNATING A PRINTING METHOD TO AN OPTION (FEED PORT, PAPER DISCHARGE TRAY, COLOR, STAPLING, SHIFTING, ETC.)
PORTION TO BE INSTRUCTED ABOUT AN OPTIONAL STATUS (HOW FAR THE FEED WAS MADE OF THE DISCHARGE WAS COMPLETED?, MAY A PRINTING SIGNAL BE OUTPUTTED?, ETC.)
CONVEYING SITUATION CONTROL AREA FOR 40 PAGES
PORTION WHICH INFORMS ABOUT ABNORMALITY OF EACH POTION
PORTION WHERE EXCHANGES OF COMMAND STATUSES ARE MADE
PORTION TO DESIGNATE THE RISING UP PROCESS
APPARATUS 1
APPARATUS 2
.....
BASIC STATUS (JAM, DOOR OPEN, NO PAPER, FULLY LOADED, ETC.)
ONE PAGE PORTION
BASIC STATUS PORTION
COMMAND STATUS PORTION
RISING UP PROCESS PORTION

FIG. 15A

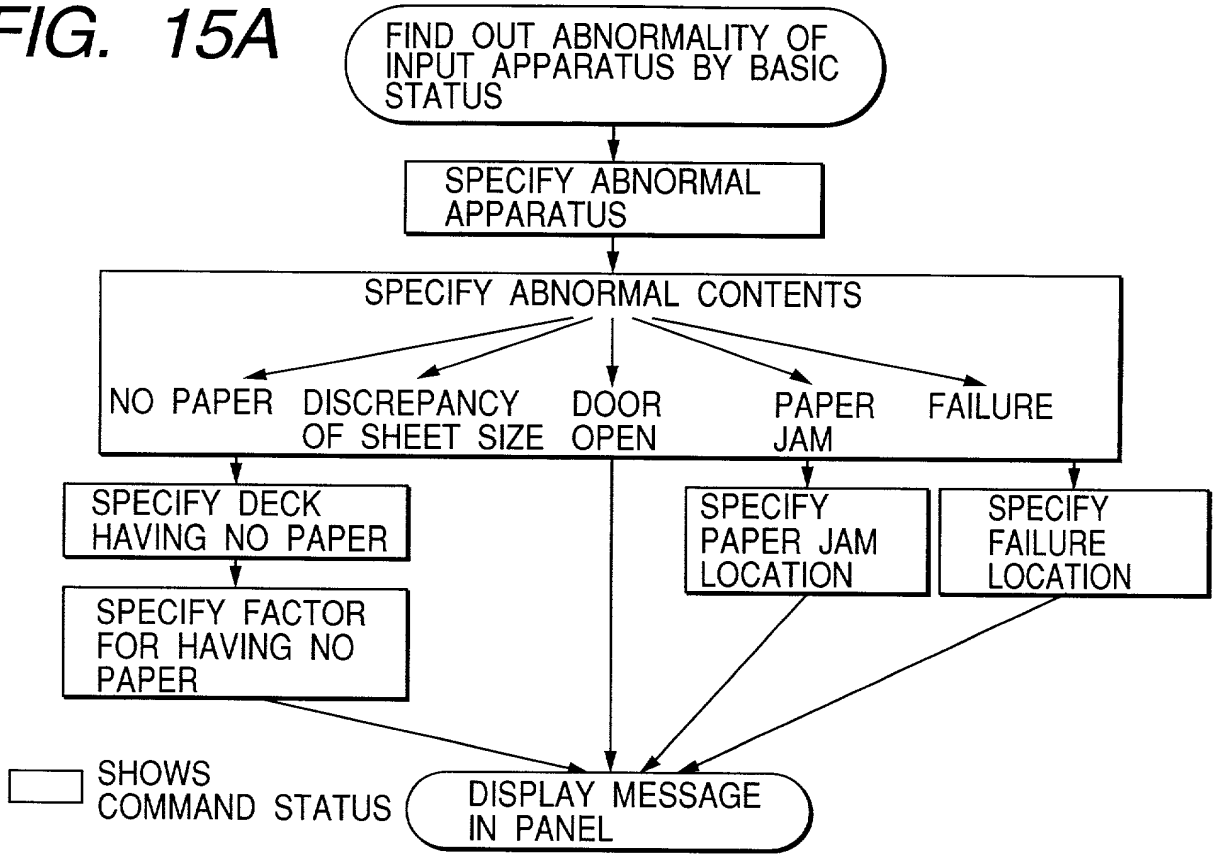


FIG. 15B

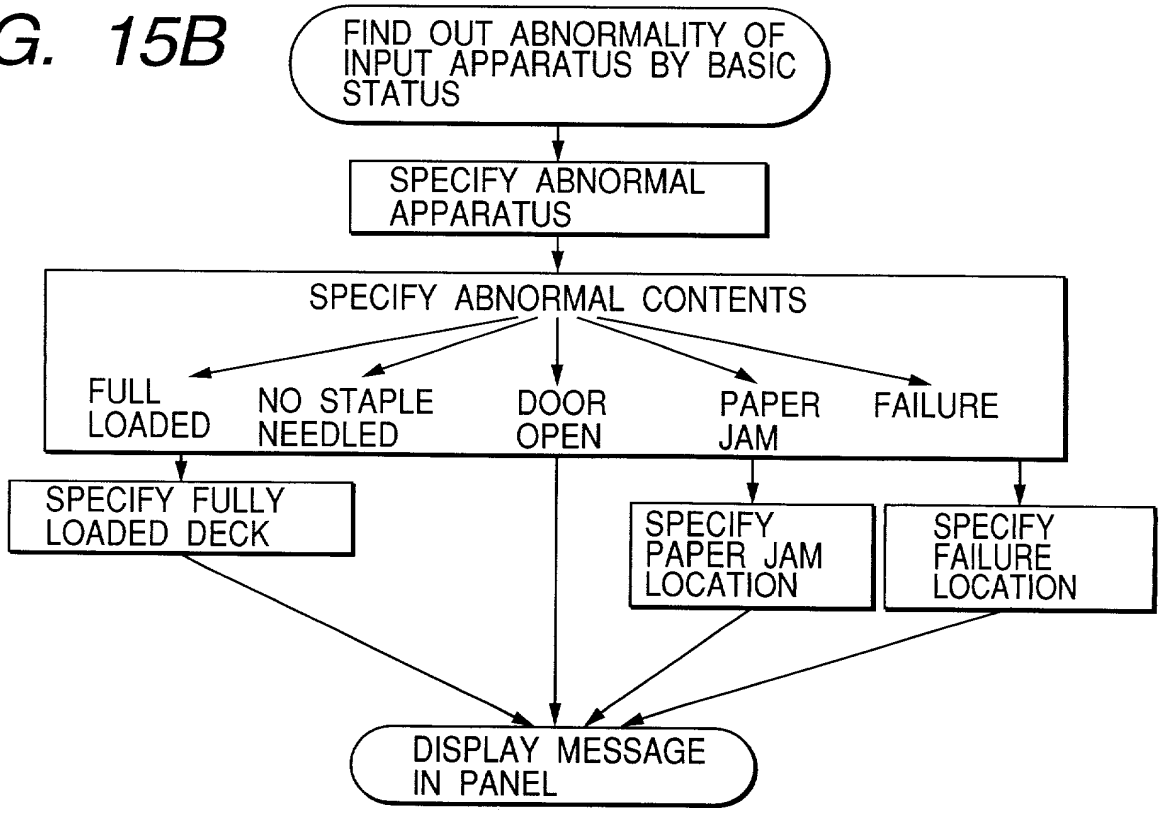


FIG. 16

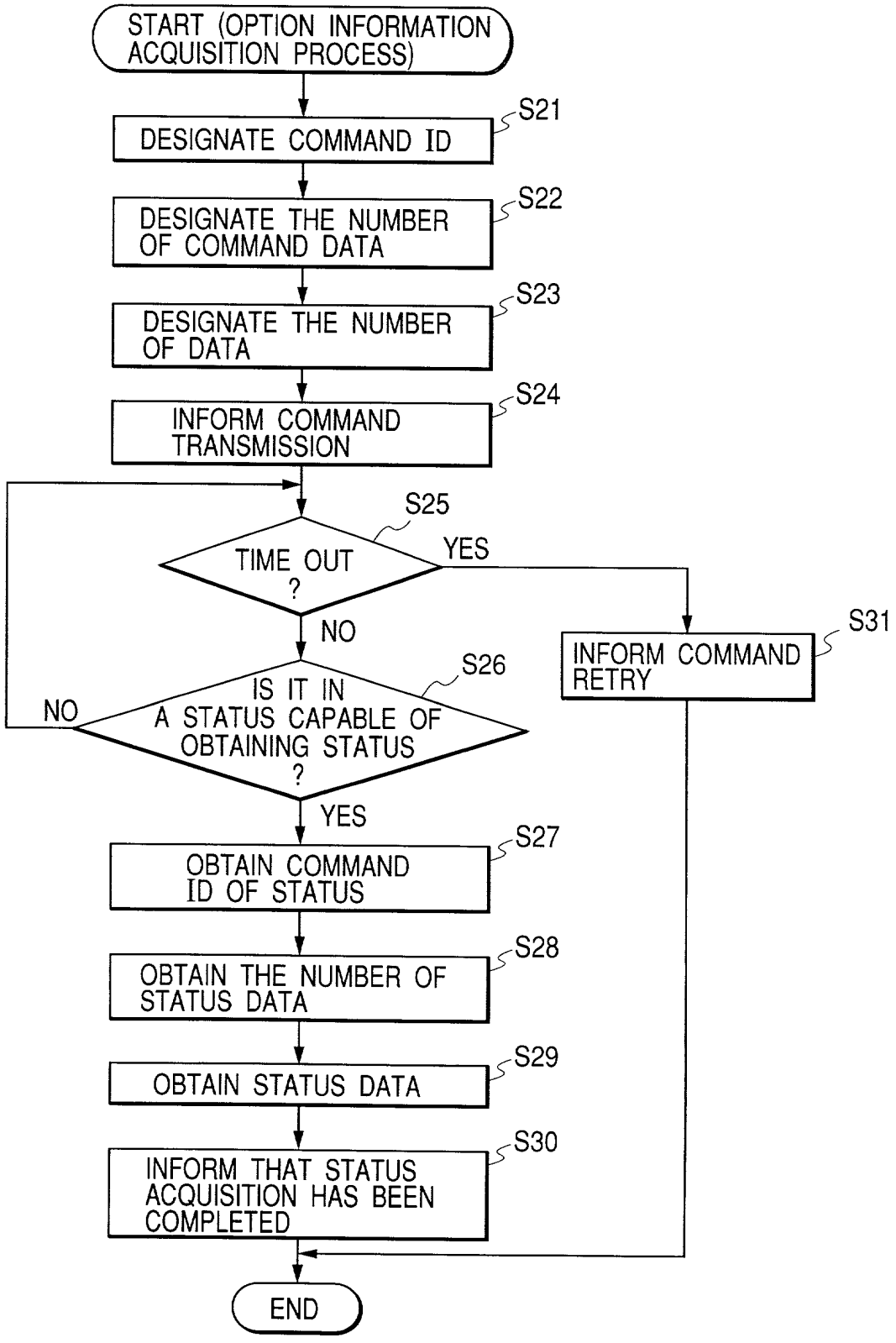

START (OPTION INFORMATION ACQUISITION PROCESS)
DESIGNATE COMMAND ID
S21
DESIGNATE THE NUMBER OF COMMAND DATA
S22
DESIGNATE THE NUMBER OF DATA
S23
INFORM COMMAND TRANSMISSION
S24
TIME OUT ?
S25
YES
NO
IS IT IN A STATUS CAPABLE OF OBTAINING STATUS ?
S26
NO
YES
INFORM COMMAND RETRY
S31
OBTAIN COMMAND ID OF STATUS
S27
OBTAIN THE NUMBER OF STATUS DATA
S28
OBTAIN STATUS DATA
S29
INFORM THAT STATUS ACQUISITION HAS BEEN COMPLETED
S30
END

FIG. 17

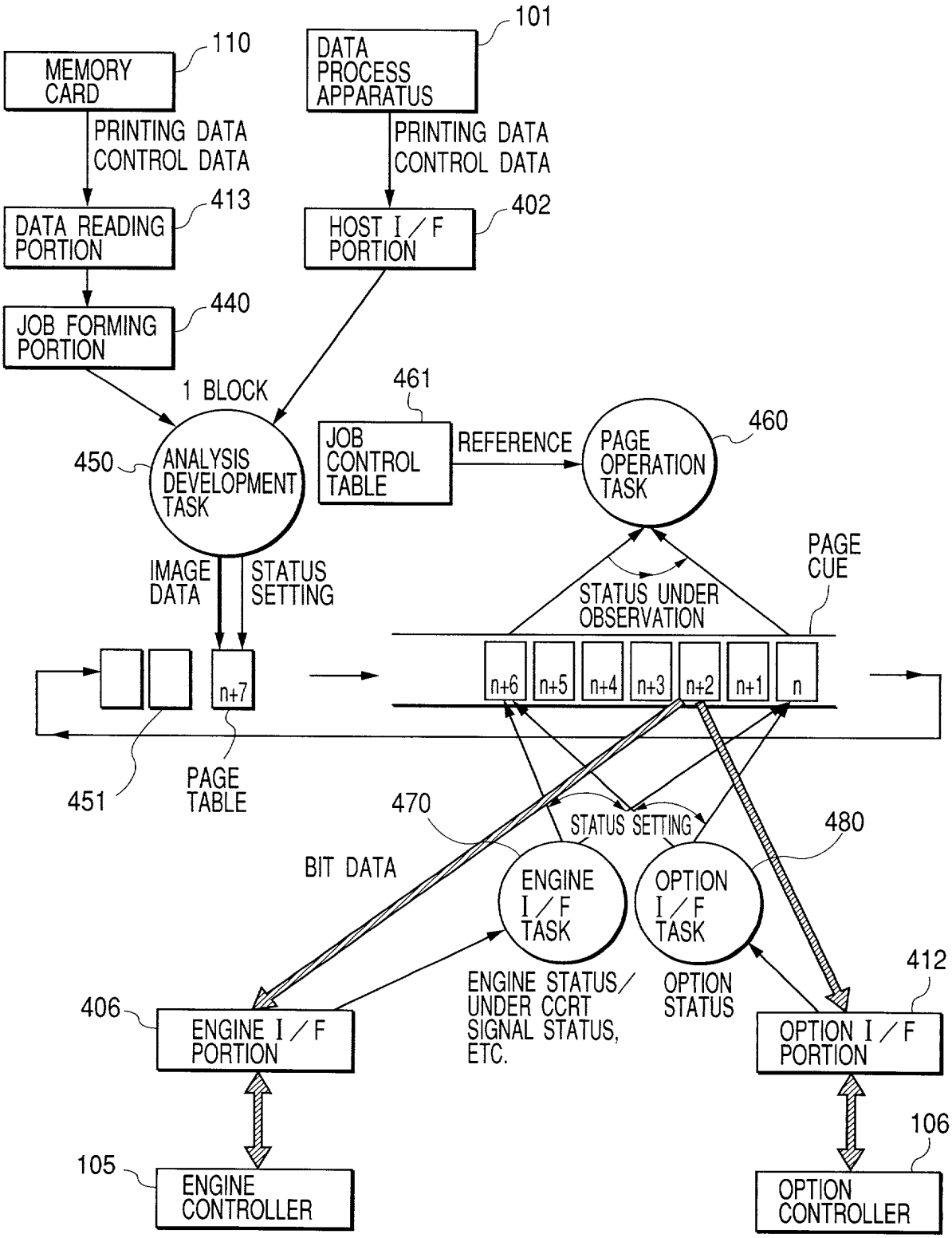

MEMORY CARD
110
DATA PROCESS APPARATUS
101
PRINTING DATA CONTROL DATA
PRINTING DATA CONTROL DATA
DATA READING PORTION
413
HOST I/F PORTION
402
JOB FORMING PORTION
440
1 BLOCK
461
JOB CONTROL TABLE
REFERENCE
PAGE OPERATION TASK
460
450
ANALYSIS DEVELOPMENT TASK
IMAGE DATA
STATUS SETTING
PAGE CUE
STATUS UNDER OBSERVATION
n+6
n+5
n+4
n+3
n+2
n+1
n
n+7
451
PAGE TABLE
470
STATUS SETTING
480
BIT DATA
ENGINE I/F TASK
OPTION I/F TASK
412
406
ENGINE I/F PORTION
ENGINE STATUS/ UNDER CCRT SIGNAL STATUS, ETC.
OPTION STATUS
OPTION I/F PORTION
106
105
ENGINE CONTROLLER
OPTION CONTROLLER

FIG. 18A

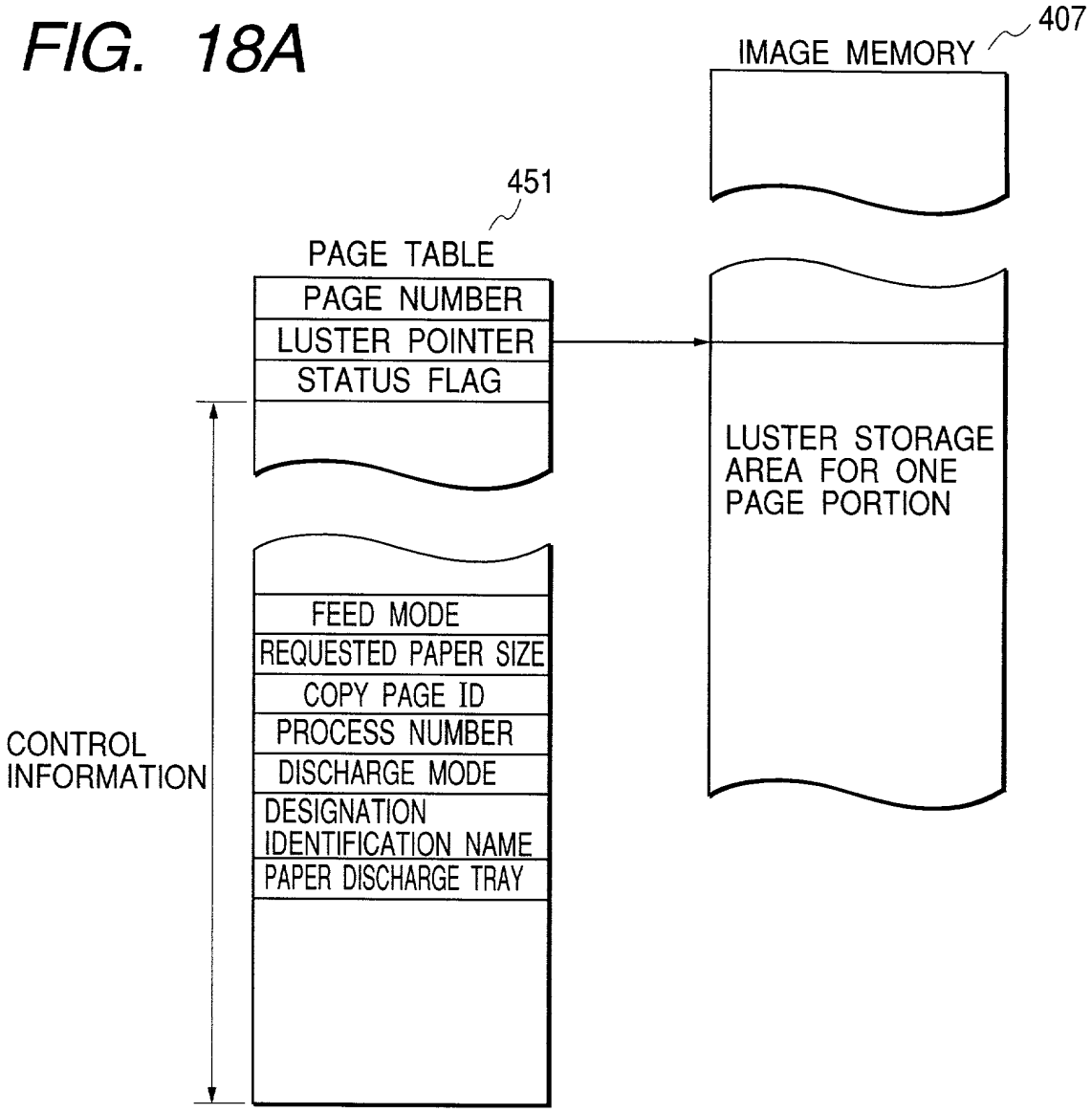


FIG. 18B

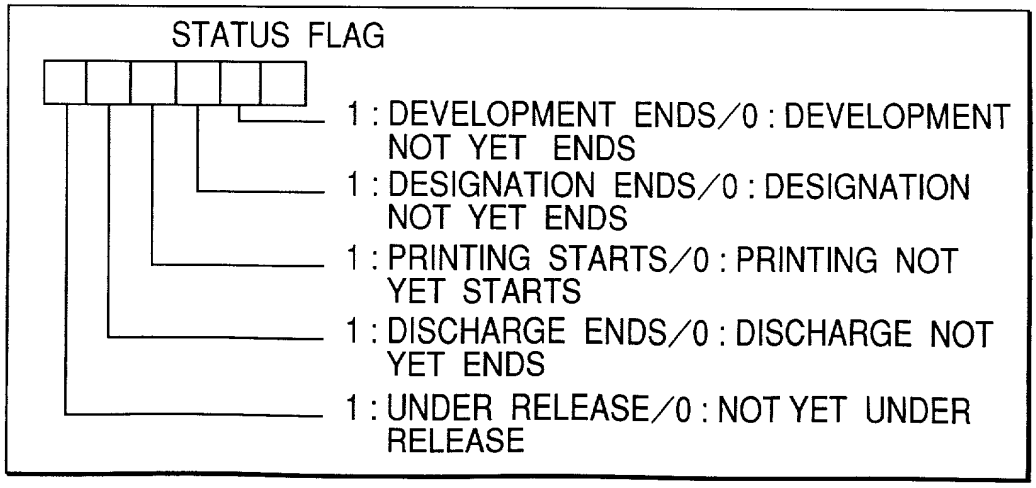


FIG. 19

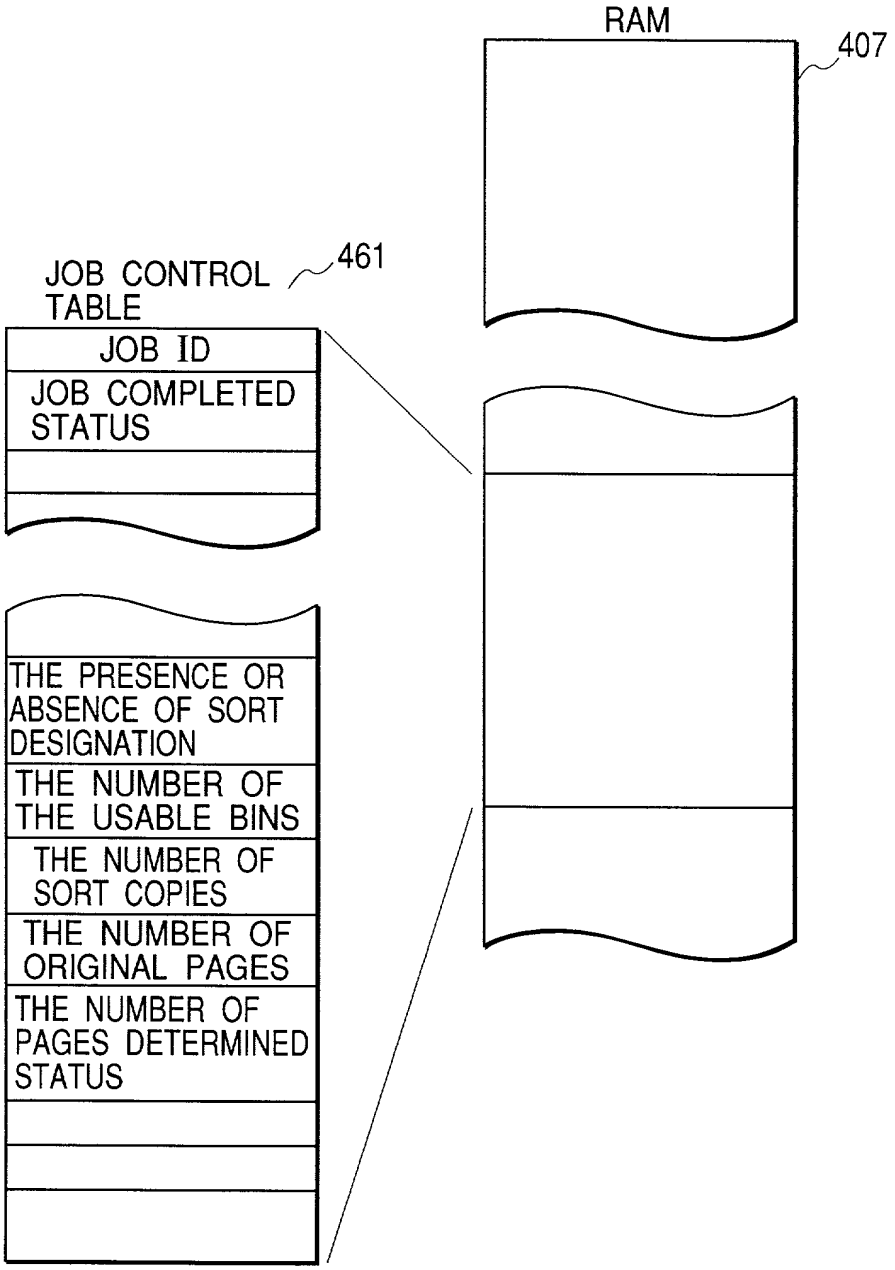

RAM
407
JOB CONTROL TABLE
461
JOB ID
JOB COMPLETED STATUS
THE PRESENCE OR ABSENCE OF SORT DESIGNATION
THE NUMBER OF THE USABLE BINS
THE NUMBER OF SORT COPIES
THE NUMBER OF ORIGINAL PAGES
THE NUMBER OF PAGES DETERMINED STATUS

FIG. 20

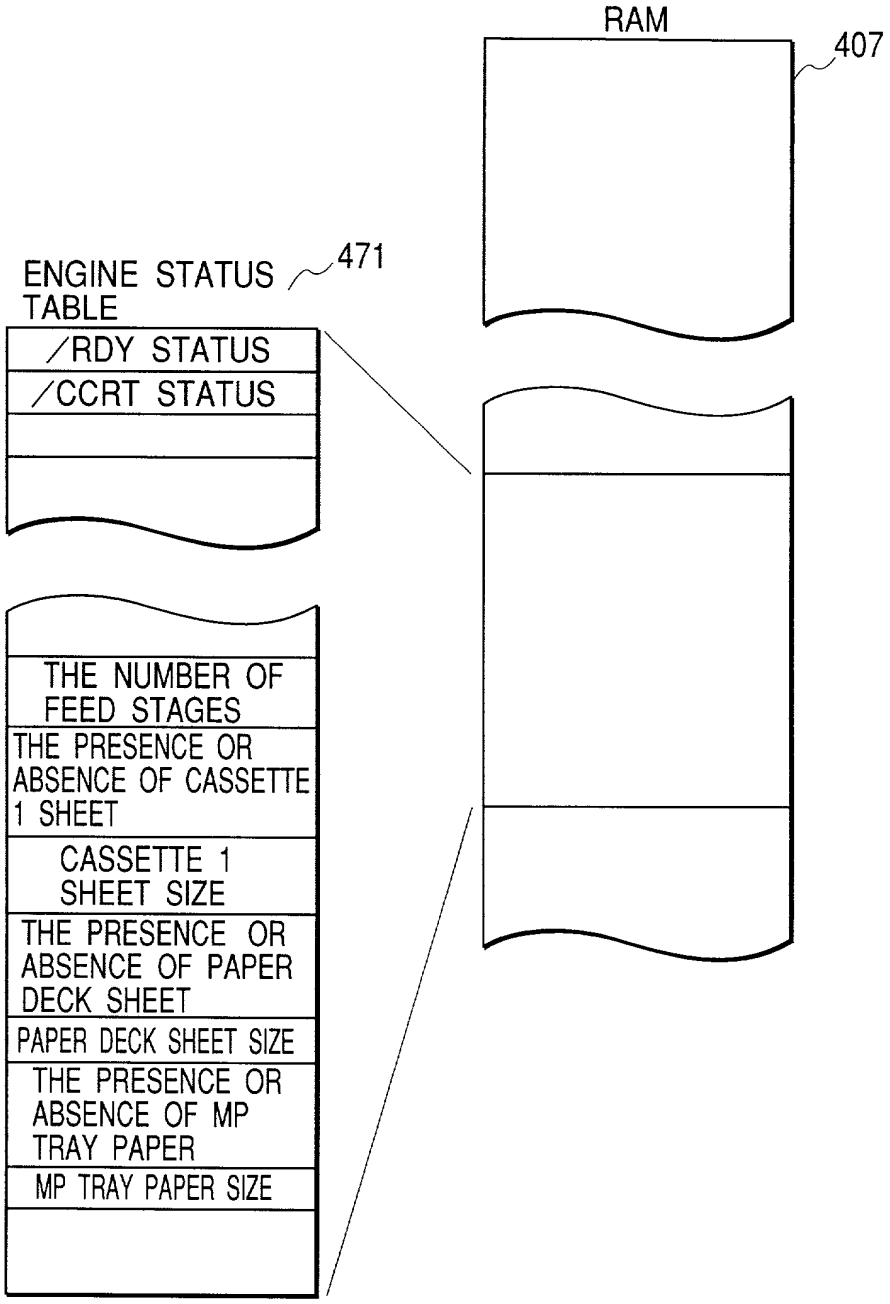

RAM
407
ENGINE STATUS TABLE
471
/RDY STATUS
/CCRT STATUS
THE NUMBER OF FEED STAGES
THE PRESENCE OR ABSENCE OF CASSETTE 1 SHEET
CASSETTE 1 SHEET SIZE
THE PRESENCE OR ABSENCE OF PAPER DECK SHEET
PAPER DECK SHEET SIZE
THE PRESENCE OR ABSENCE OF MP TRAY PAPER
MP TRAY PAPER SIZE

FIG. 21

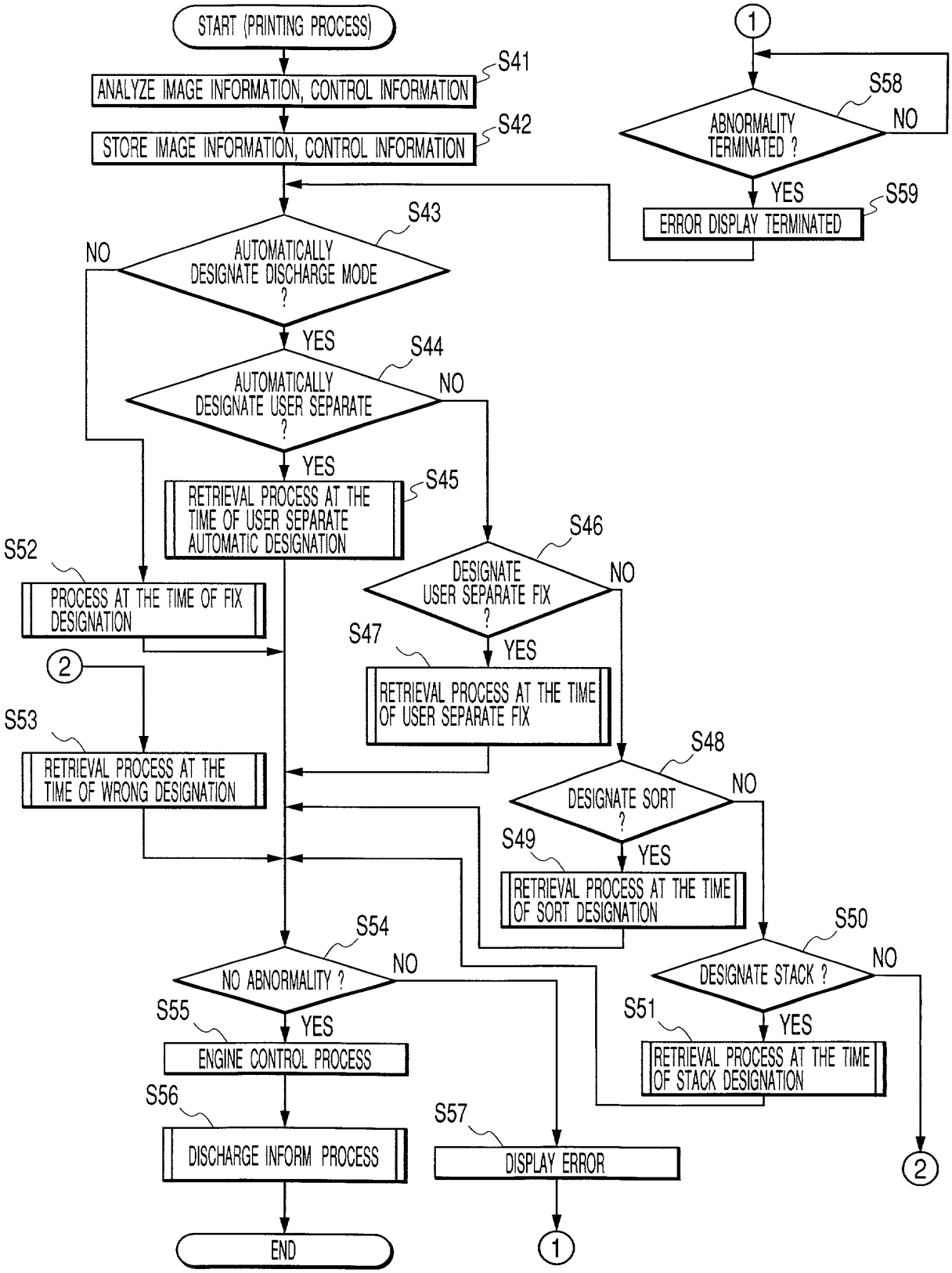

START (PRINTING PROCESS)
S41
ANALYZE IMAGE INFORMATION, CONTROL INFORMATION
S42
STORE IMAGE INFORMATION, CONTROL INFORMATION
S43
AUTOMATICALLY DESIGNATE DISCHARGE MODE ?
NO
YES
S44
AUTOMATICALLY DESIGNATE USER SEPARATE ?
NO
YES
S45
RETRIEVAL PROCESS AT THE TIME OF USER SEPARATE AUTOMATIC DESIGNATION
S46
DESIGNATE USER SEPARATE FIX ?
NO
YES
S47
RETRIEVAL PROCESS AT THE TIME OF USER SEPARATE FIX
S48
DESIGNATE SORT ?
NO
YES
S49
RETRIEVAL PROCESS AT THE TIME OF SORT DESIGNATION
S50
DESIGNATE STACK ?
NO
YES
S51
RETRIEVAL PROCESS AT THE TIME OF STACK DESIGNATION
S52
PROCESS AT THE TIME OF FIX DESIGNATION
S53
RETRIEVAL PROCESS AT THE TIME OF WRONG DESIGNATION
S54
NO ABNORMALITY ?
NO
YES
S55
ENGINE CONTROL PROCESS
S56
DISCHARGE INFORM PROCESS
S57
DISPLAY ERROR
S58
ABNORMALITY TERMINATED ?
NO
YES
S59
ERROR DISPLAY TERMINATED
END
1
2

FIG. 22

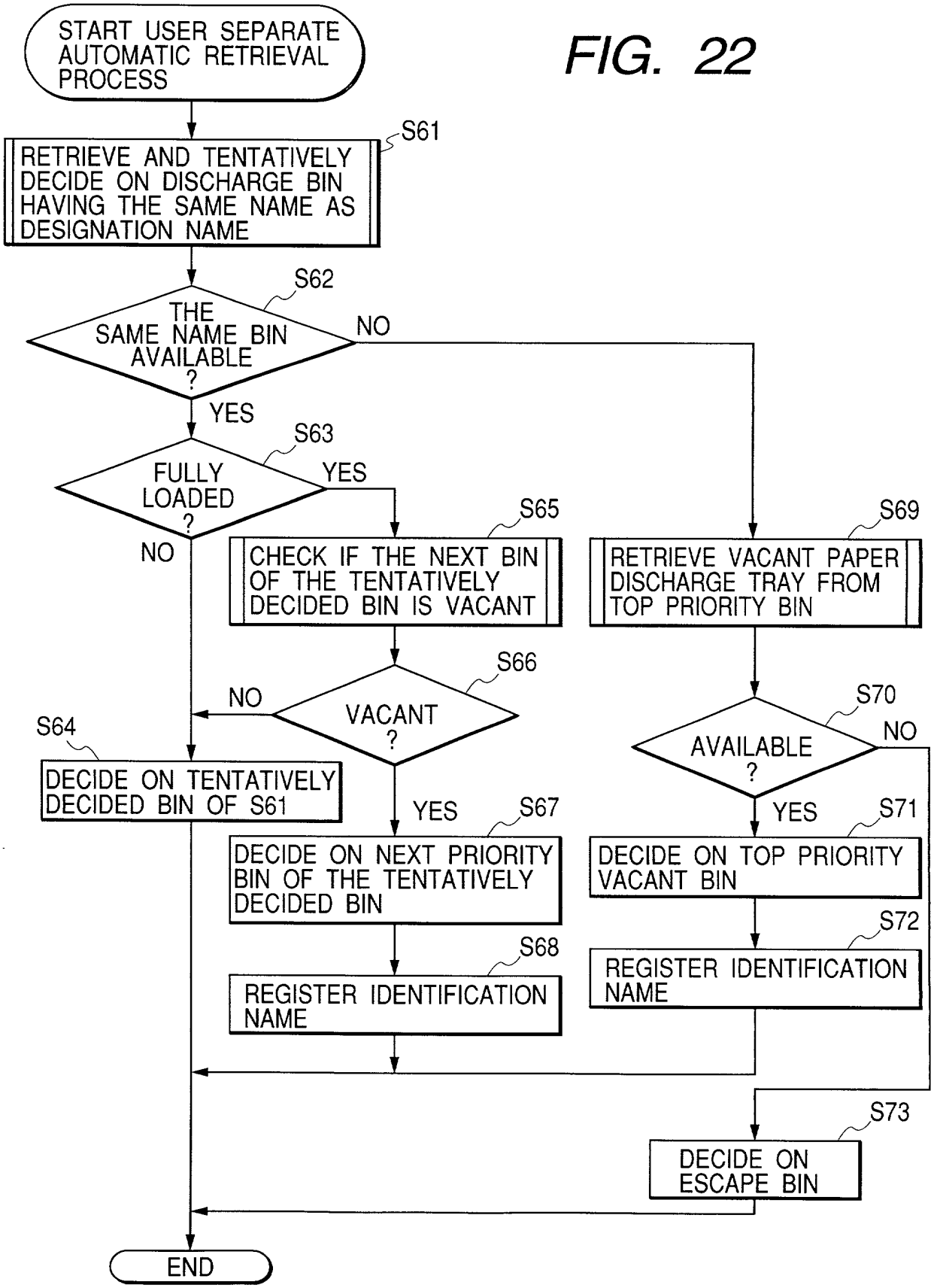

START USER SEPARATE AUTOMATIC RETRIEVAL PROCESS
S61
RETRIEVE AND TENTATIVELY DECIDE ON DISCHARGE BIN HAVING THE SAME NAME AS DESIGNATION NAME
S62
THE SAME NAME BIN AVAILABLE ?
NO
YES
S63
FULLY LOADED ?
YES
NO
S65
CHECK IF THE NEXT BIN OF THE TENTATIVELY DECIDED BIN IS VACANT
S66
VACANT ?
NO
YES
S64
DECIDE ON TENTATIVELY DECIDED BIN OF S61
S67
DECIDE ON NEXT PRIORITY BIN OF THE TENTATIVELY DECIDED BIN
S68
REGISTER IDENTIFICATION NAME
S69
RETRIEVE VACANT PAPER DISCHARGE TRAY FROM TOP PRIORITY BIN
S70
AVAILABLE ?
NO
YES
S71
DECIDE ON TOP PRIORITY VACANT BIN
S72
REGISTER IDENTIFICATION NAME
S73
DECIDE ON ESCAPE BIN
END

FIG. 23

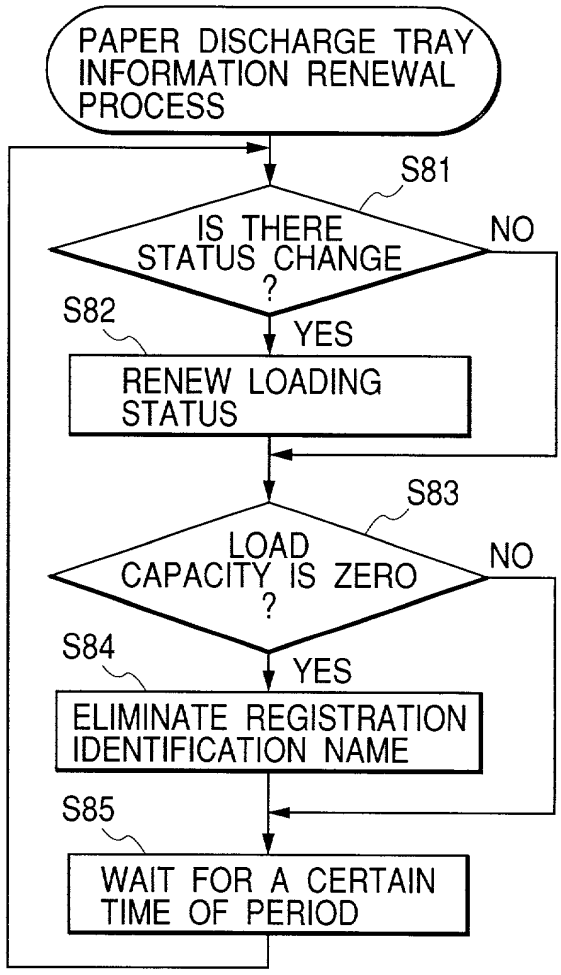

PAPER DISCHARGE TRAY INFORMATION RENEWAL PROCESS
S81
IS THERE STATUS CHANGE ?
NO
YES
S82
RENEW LOADING STATUS
S83
LOAD CAPACITY IS ZERO ?
NO
YES
S84
ELIMINATE REGISTRATION IDENTIFICATION NAME
S85
WAIT FOR A CERTAIN TIME OF PERIOD

FIG. 24

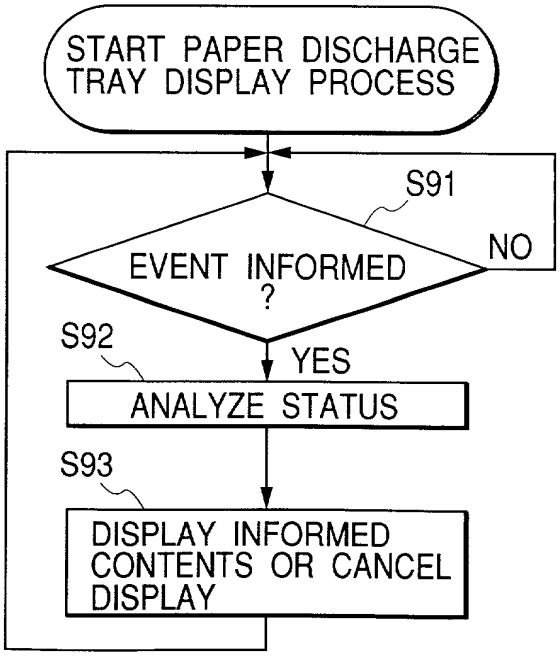

START PAPER DISCHARGE TRAY DISPLAY PROCESS
S91
EVENT INFORMED ?
NO
YES
S92
ANALYZE STATUS
S93
DISPLAY INFORMED CONTENTS OR CANCEL DISPLAY

FIG. 25

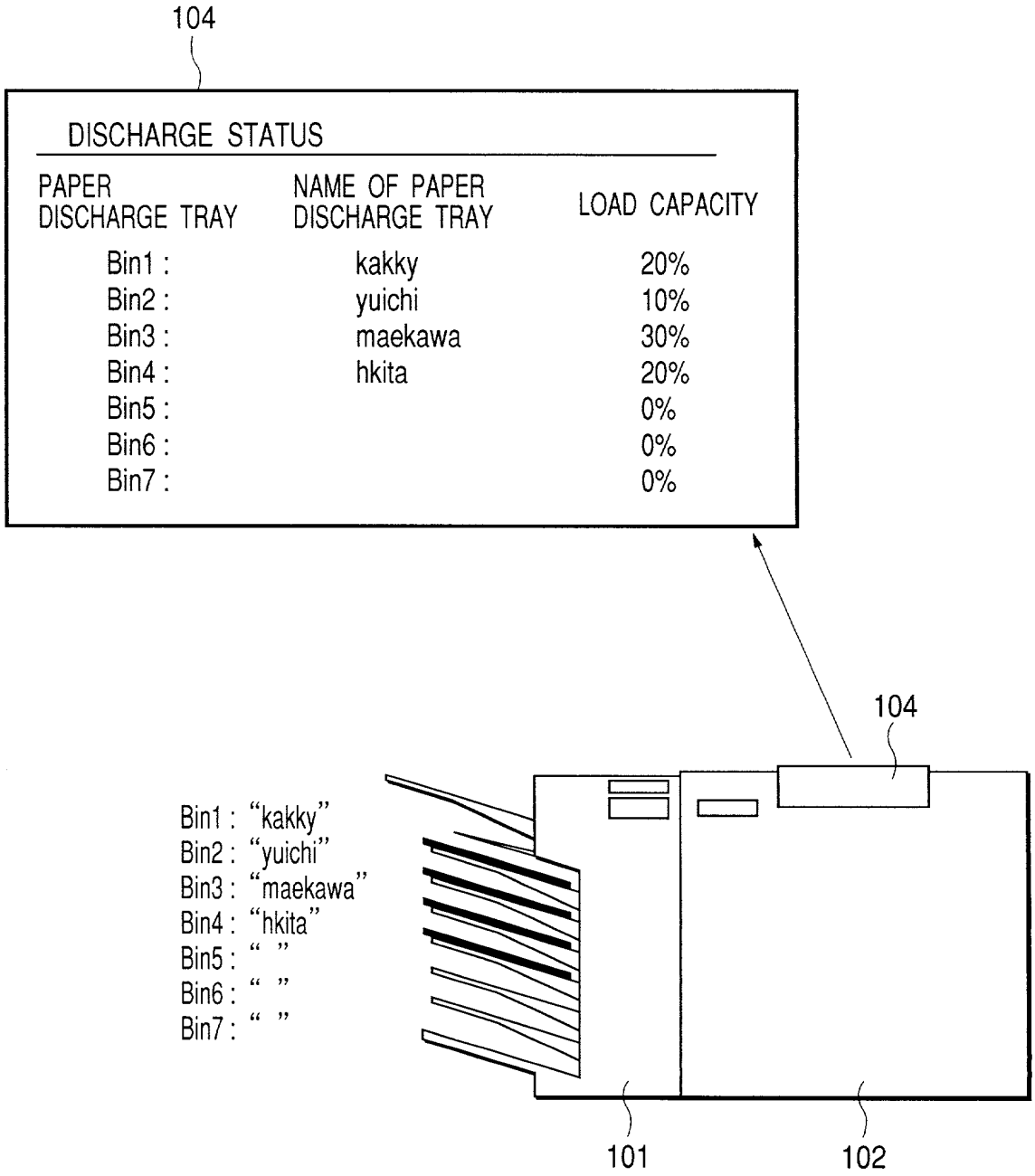

104
DISCHARGE STATUS
PAPER DISCHARGE TRAY
NAME OF PAPER DISCHARGE TRAY
LOAD CAPACITY
Bin1 : kakky 20%
Bin2 : yuichi 10%
Bin3 : maekawa 30%
Bin4 : hkita 20%
Bin5 : 0%
Bin6 : 0%
Bin7 : 0%
104
Bin1 : "kakky"
Bin2 : "yuichi"
Bin3 : "maekawa"
Bin4 : "hkita"
Bin5 : " "
Bin6 : " "
Bin7 : " "
101
102

FIG. 26

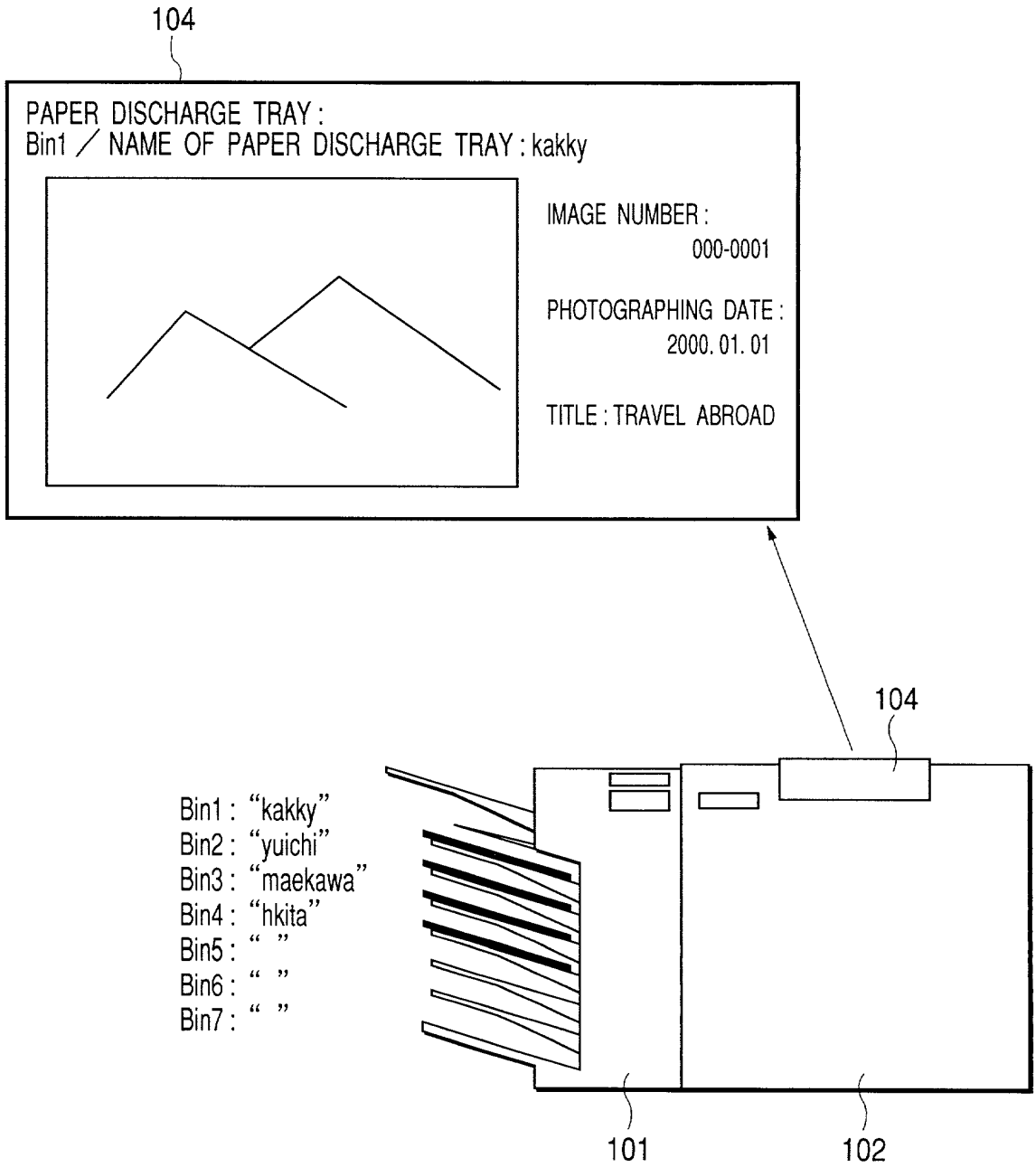

104
PAPER DISCHARGE TRAY :
Bin1 ／ NAME OF PAPER DISCHARGE TRAY : kakky
IMAGE NUMBER :
000-0001
PHOTOGRAPHING DATE :
2000. 01. 01
TITLE : TRAVEL ABROAD
104
Bin1 : “kakky”
Bin2 : “yuichi”
Bin3 : “maekawa”
Bin4 : “hkita”
Bin5 : “ ”
Bin6 : “ ”
Bin7 : “ ”
101
102

FIG. 27

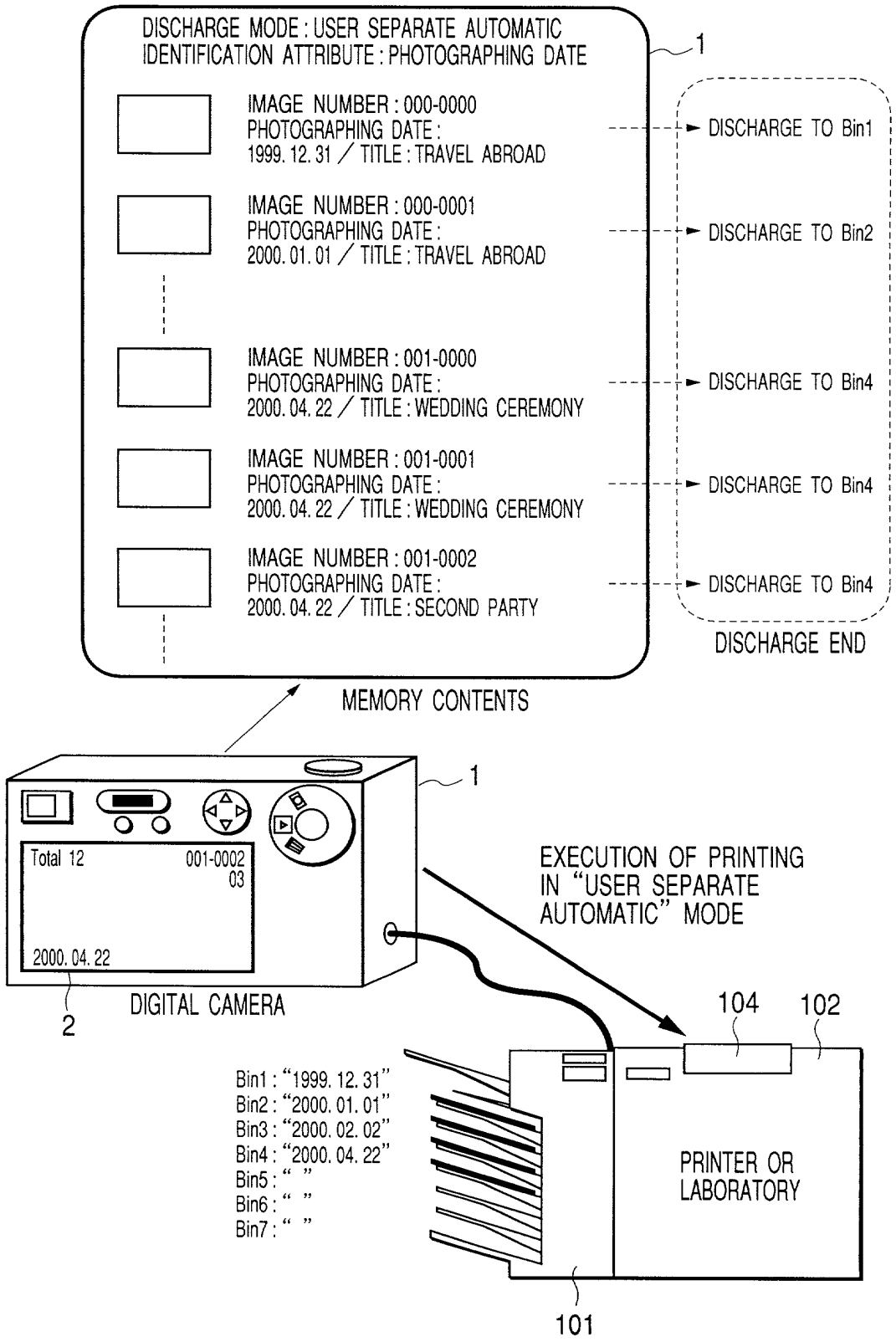

DISCHARGE MODE : USER SEPARATE AUTOMATIC
IDENTIFICATION ATTRIBUTE : PHOTOGRAPHING DATE
1
IMAGE NUMBER : 000-0000
PHOTOGRAPHING DATE :
1999. 12. 31 / TITLE : TRAVEL ABROAD
DISCHARGE TO Bin1
IMAGE NUMBER : 000-0001
PHOTOGRAPHING DATE :
2000. 01. 01 / TITLE : TRAVEL ABROAD
DISCHARGE TO Bin2
IMAGE NUMBER : 001-0000
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : WEDDING CEREMONY
DISCHARGE TO Bin4
IMAGE NUMBER : 001-0001
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : WEDDING CEREMONY
DISCHARGE TO Bin4
IMAGE NUMBER : 001-0002
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : SECOND PARTY
DISCHARGE TO Bin4
DISCHARGE END
MEMORY CONTENTS
1
Total 12
001-0002
03
2000. 04. 22
DIGITAL CAMERA
2
EXECUTION OF PRINTING
IN "USER SEPARATE
AUTOMATIC" MODE
104
102
Bin1 : "1999. 12. 31"
Bin2 : "2000. 01. 01"
Bin3 : "2000. 02. 02"
Bin4 : "2000. 04. 22"
Bin5 : " "
Bin6 : " "
Bin7 : " "
PRINTER OR
LABORATORY
101

FIG. 28

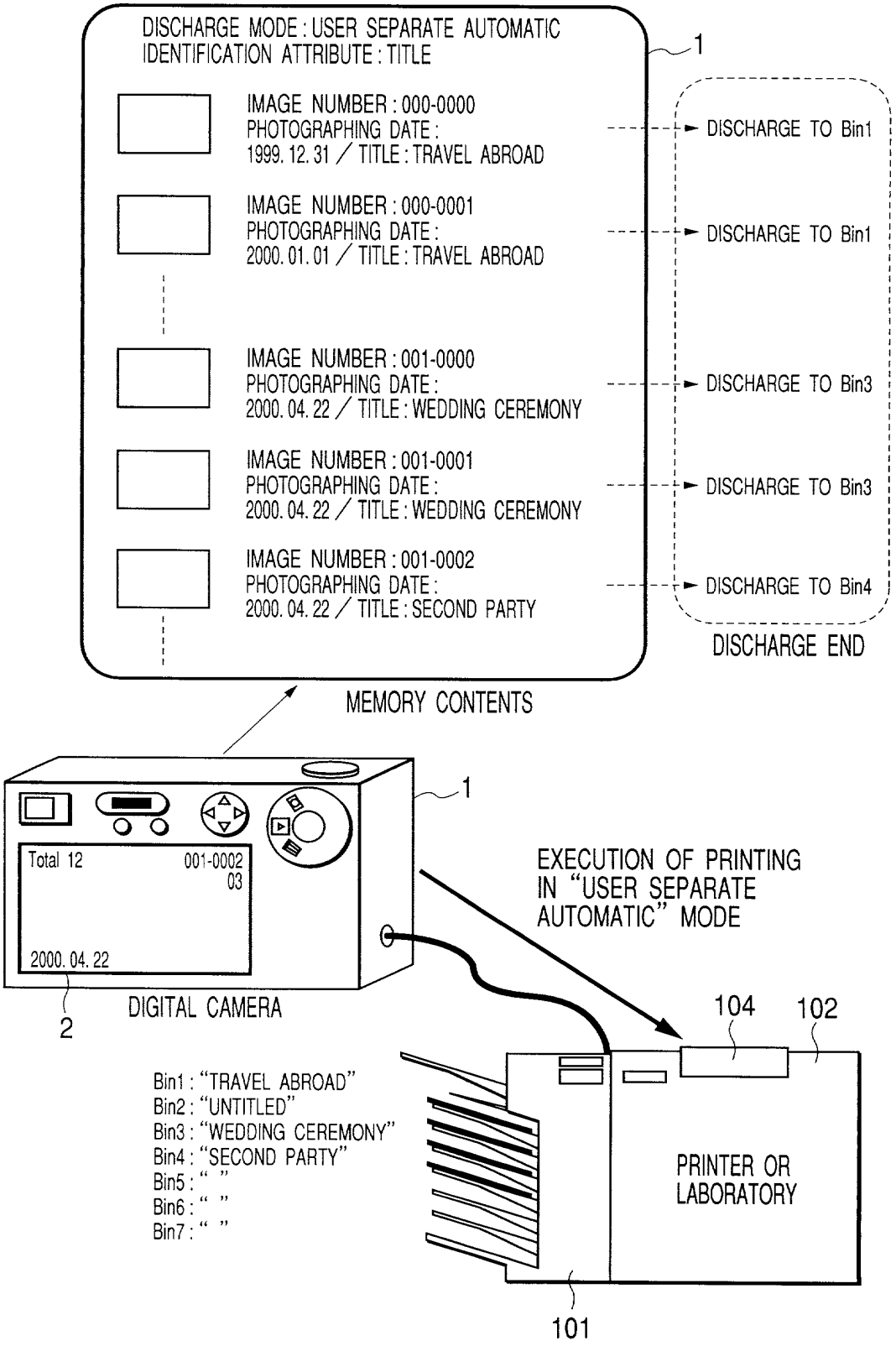

DISCHARGE MODE : USER SEPARATE AUTOMATIC
IDENTIFICATION ATTRIBUTE : TITLE
1
IMAGE NUMBER : 000-0000
PHOTOGRAPHING DATE :
1999. 12. 31 / TITLE : TRAVEL ABROAD
DISCHARGE TO Bin1
IMAGE NUMBER : 000-0001
PHOTOGRAPHING DATE :
2000. 01. 01 / TITLE : TRAVEL ABROAD
DISCHARGE TO Bin1
IMAGE NUMBER : 001-0000
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : WEDDING CEREMONY
DISCHARGE TO Bin3
IMAGE NUMBER : 001-0001
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : WEDDING CEREMONY
DISCHARGE TO Bin3
IMAGE NUMBER : 001-0002
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : SECOND PARTY
DISCHARGE TO Bin4
DISCHARGE END
MEMORY CONTENTS
1
Total 12
001-0002
03
2000. 04. 22
DIGITAL CAMERA
2
EXECUTION OF PRINTING
IN "USER SEPARATE
AUTOMATIC" MODE
104
102
Bin1 : "TRAVEL ABROAD"
Bin2 : "UNTITLED"
Bin3 : "WEDDING CEREMONY"
Bin4 : "SECOND PARTY"
Bin5 : " "
Bin6 : " "
Bin7 : " "
PRINTER OR
LABORATORY
101

FIG. 29

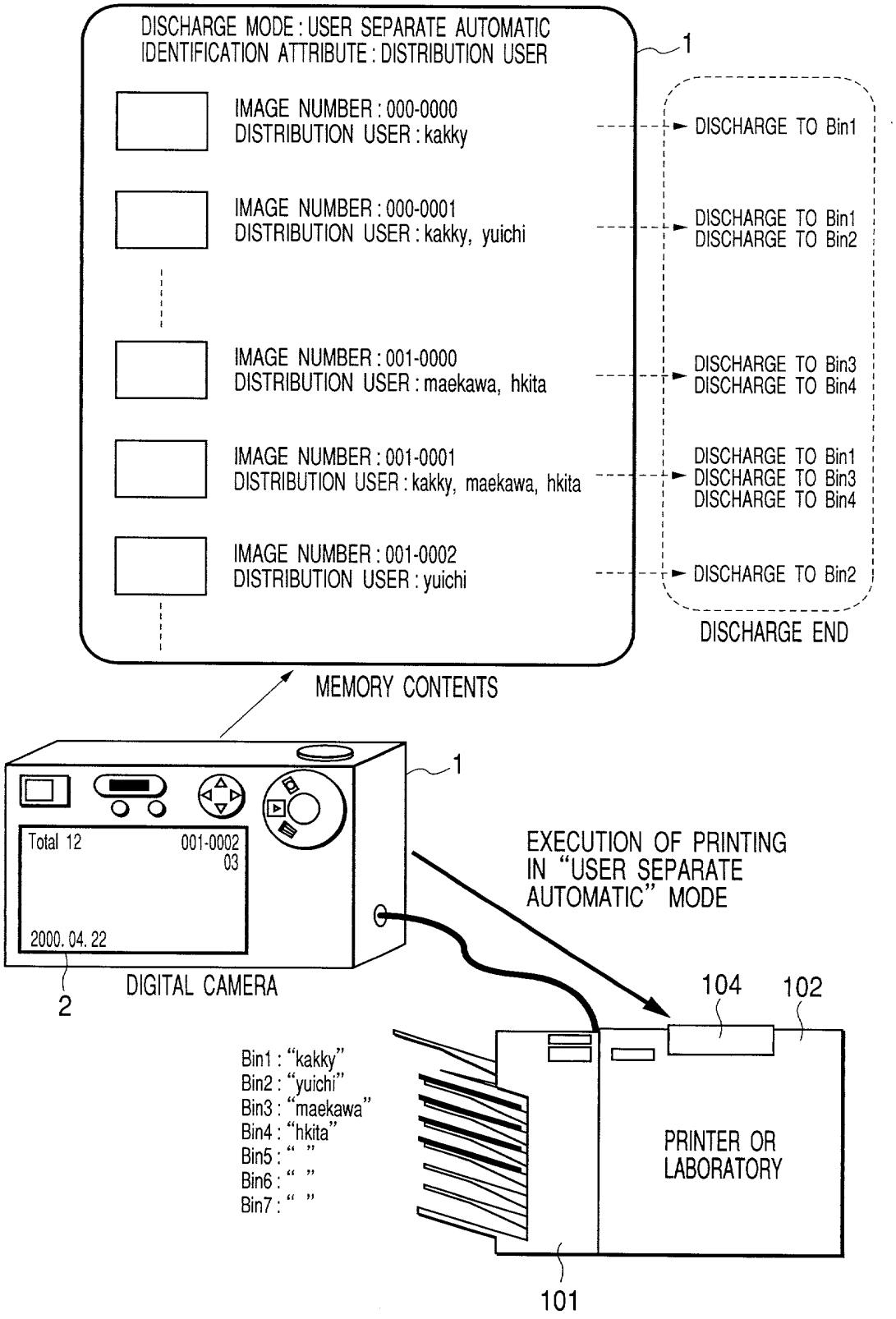

DISCHARGE MODE : USER SEPARATE AUTOMATIC
IDENTIFICATION ATTRIBUTE : DISTRIBUTION USER
1
IMAGE NUMBER : 000-0000
DISTRIBUTION USER : kakky
DISCHARGE TO Bin1
IMAGE NUMBER : 000-0001
DISTRIBUTION USER : kakky, yuichi
DISCHARGE TO Bin1
DISCHARGE TO Bin2
IMAGE NUMBER : 001-0000
DISTRIBUTION USER : maekawa, hkita
DISCHARGE TO Bin3
DISCHARGE TO Bin4
IMAGE NUMBER : 001-0001
DISTRIBUTION USER : kakky, maekawa, hkita
DISCHARGE TO Bin1
DISCHARGE TO Bin3
DISCHARGE TO Bin4
IMAGE NUMBER : 001-0002
DISTRIBUTION USER : yuichi
DISCHARGE TO Bin2
DISCHARGE END
MEMORY CONTENTS
1
Total 12
001-0002
03
2000. 04. 22
DIGITAL CAMERA
2
EXECUTION OF PRINTING
IN "USER SEPARATE
AUTOMATIC" MODE
104
102
Bin1 : "kakky"
Bin2 : "yuichi"
Bin3 : "maekawa"
Bin4 : "hkita"
Bin5 : " "
Bin6 : " "
Bin7 : " "
PRINTER OR
LABORATORY
101

FIG. 30A

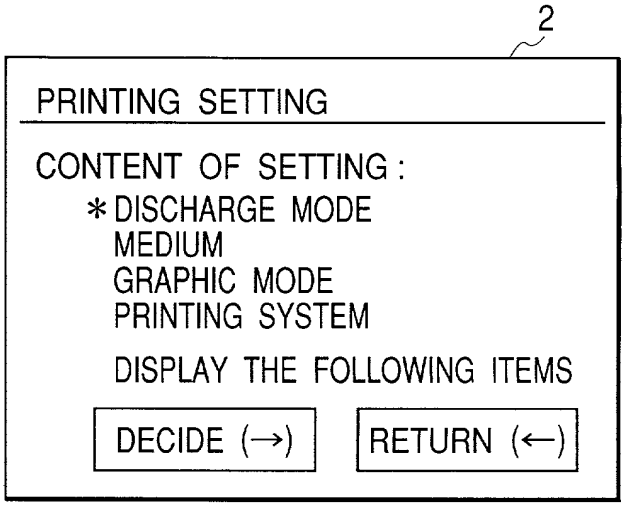


FIG. 30B

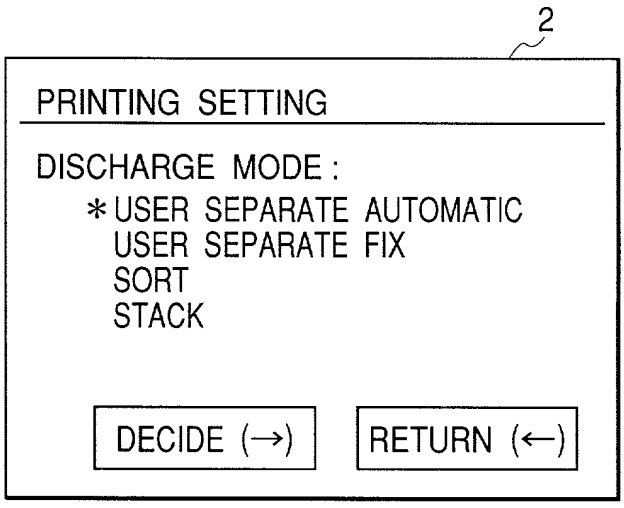
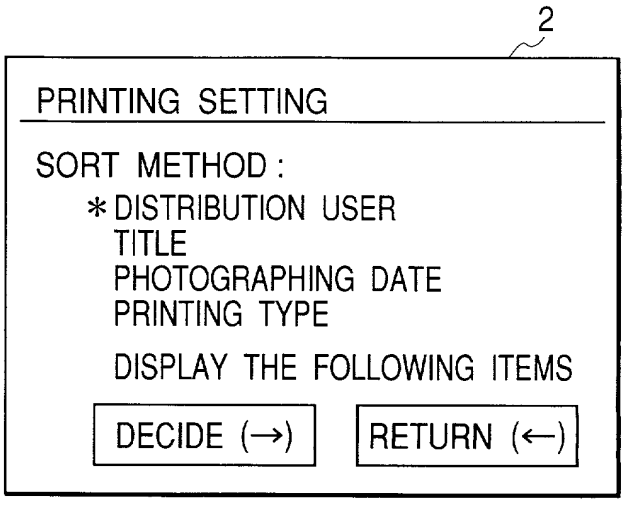


FIG. 30C



JP2007-096550A 2007.04.12

FIG. 31

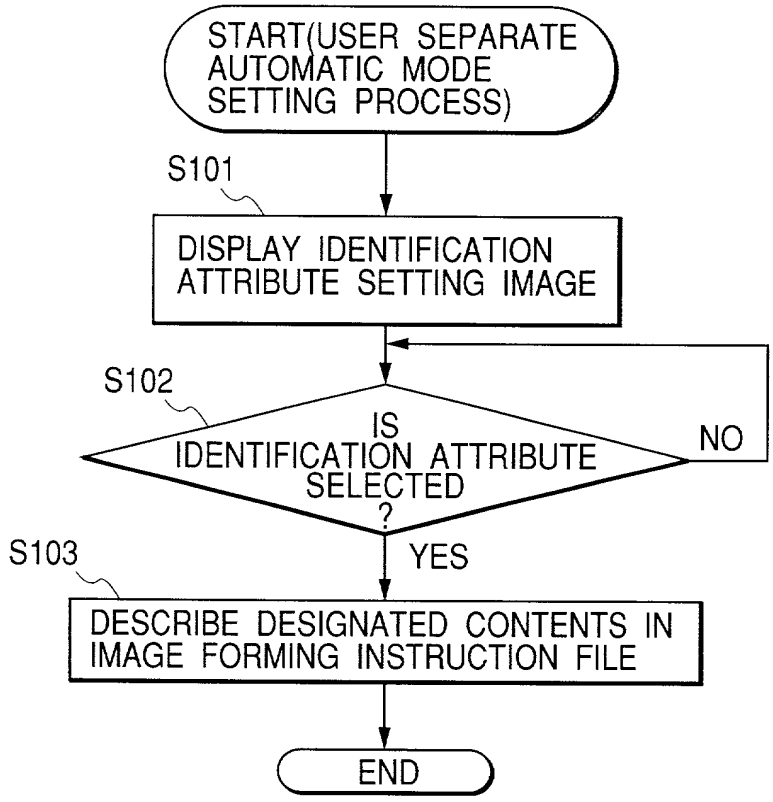

START(USER SEPARATE AUTOMATIC MODE SETTING PROCESS)
S101
DISPLAY IDENTIFICATION ATTRIBUTE SETTING IMAGE
S102
IS IDENTIFICATION ATTRIBUTE SELECTED ?
NO
YES
S103
DESCRIBE DESIGNATED CONTENTS IN IMAGE FORMING INSTRUCTION FILE
END

FIG. 32A

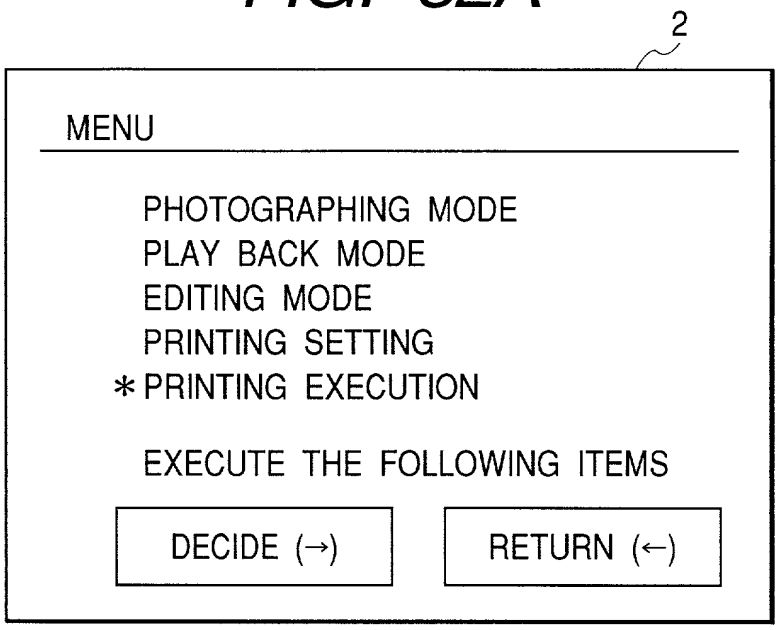


FIG. 32B

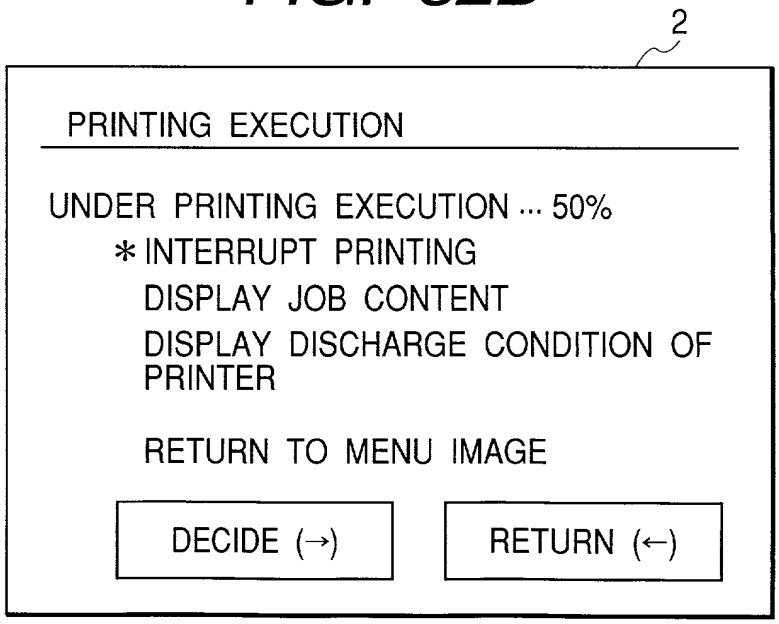
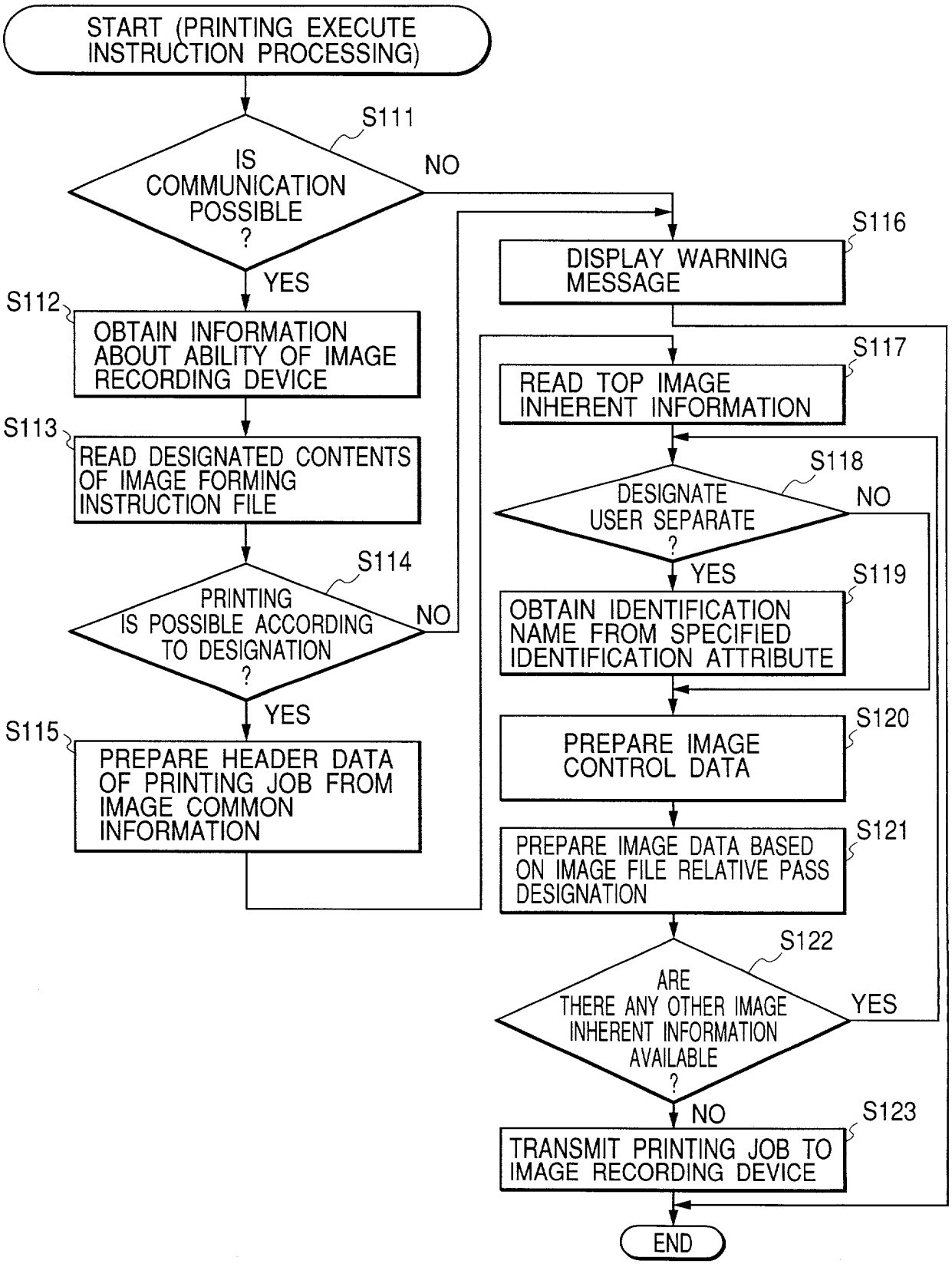


FIG. 33



US 2006/0066900 A1 Mar. 30, 2006

FIG. 34

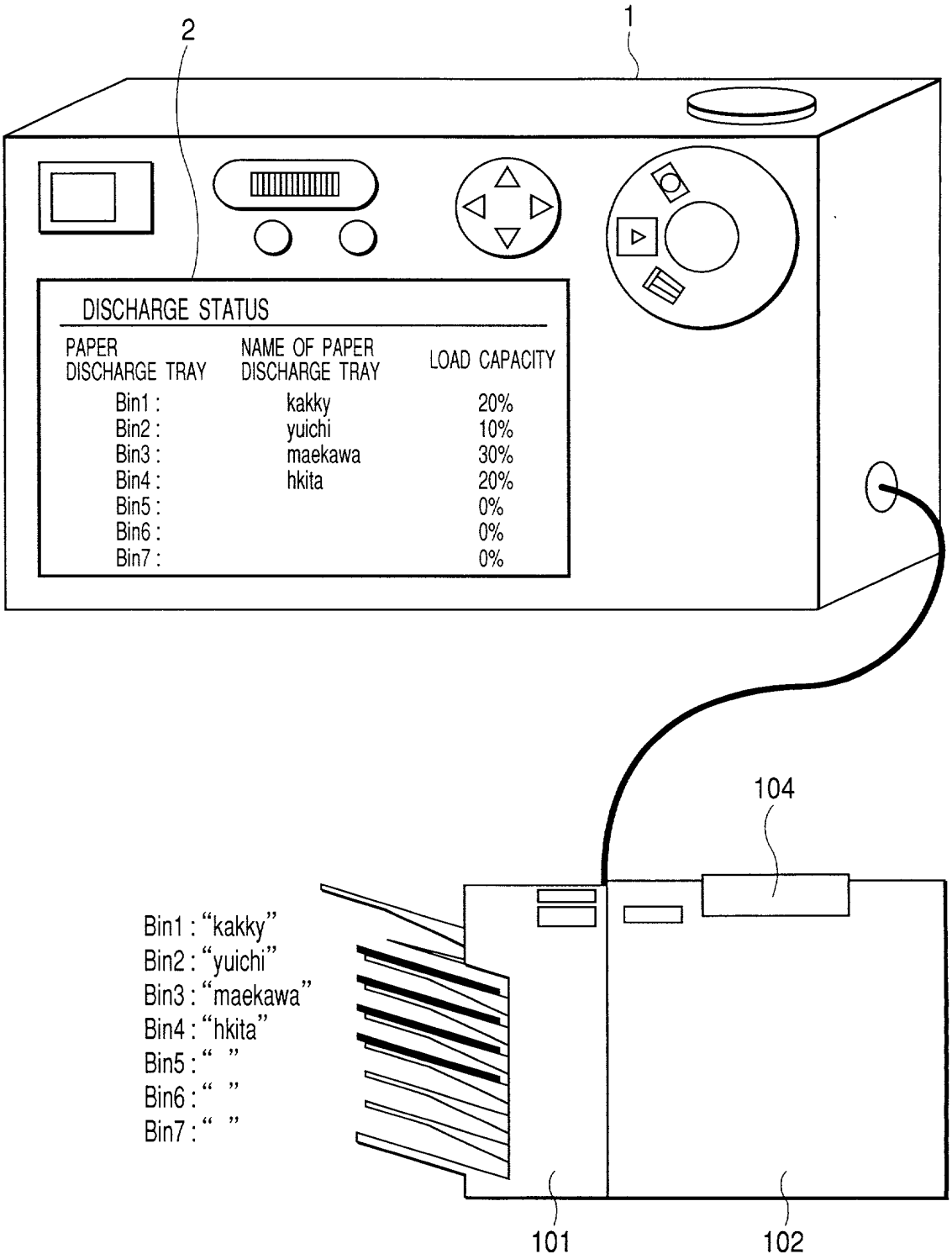

2
1
DISCHARGE STATUS
PAPER DISCHARGE TRAY
NAME OF PAPER DISCHARGE TRAY
LOAD CAPACITY
Bin1 : kakky 20%
Bin2 : yuichi 10%
Bin3 : maekawa 30%
Bin4 : hkita 20%
Bin5 : 0%
Bin6 : 0%
Bin7 : 0%
104
Bin1 : "kakky"
Bin2 : "yuichi"
Bin3 : "maekawa"
Bin4 : "hkita"
Bin5 : " "
Bin6 : " "
Bin7 : " "
101
102

FIG. 35

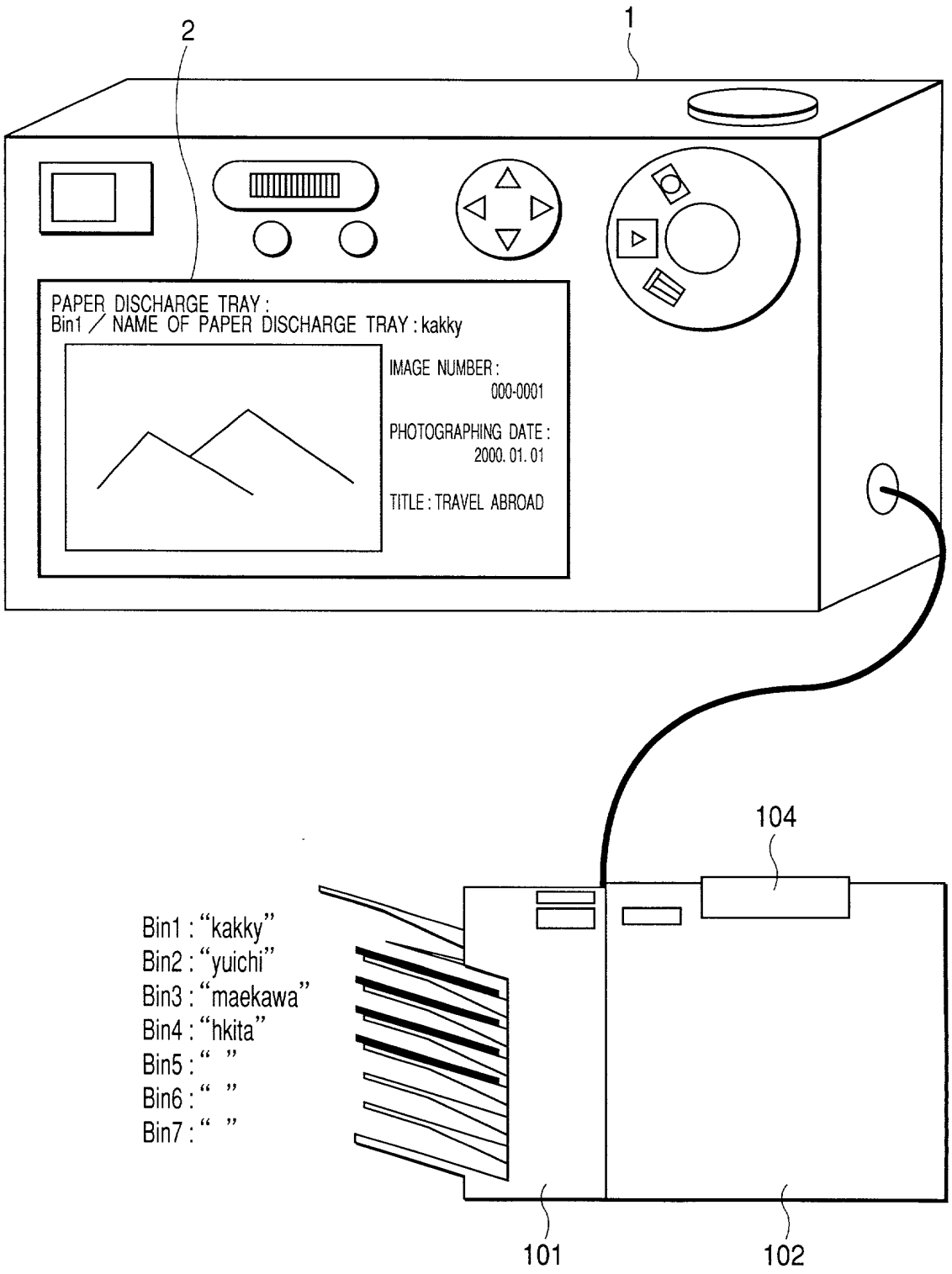

2
1
PAPER DISCHARGE TRAY :
Bin1 / NAME OF PAPER DISCHARGE TRAY : kakky
IMAGE NUMBER :
000-0001
PHOTOGRAPHING DATE :
2000. 01. 01
TITLE : TRAVEL ABROAD
104
Bin1 : "kakky"
Bin2 : "yuichi"
Bin3 : "maekawa"
Bin4 : "hkita"
Bin5 : " "
Bin6 : " "
Bin7 : " "
101
102

FIG. 36

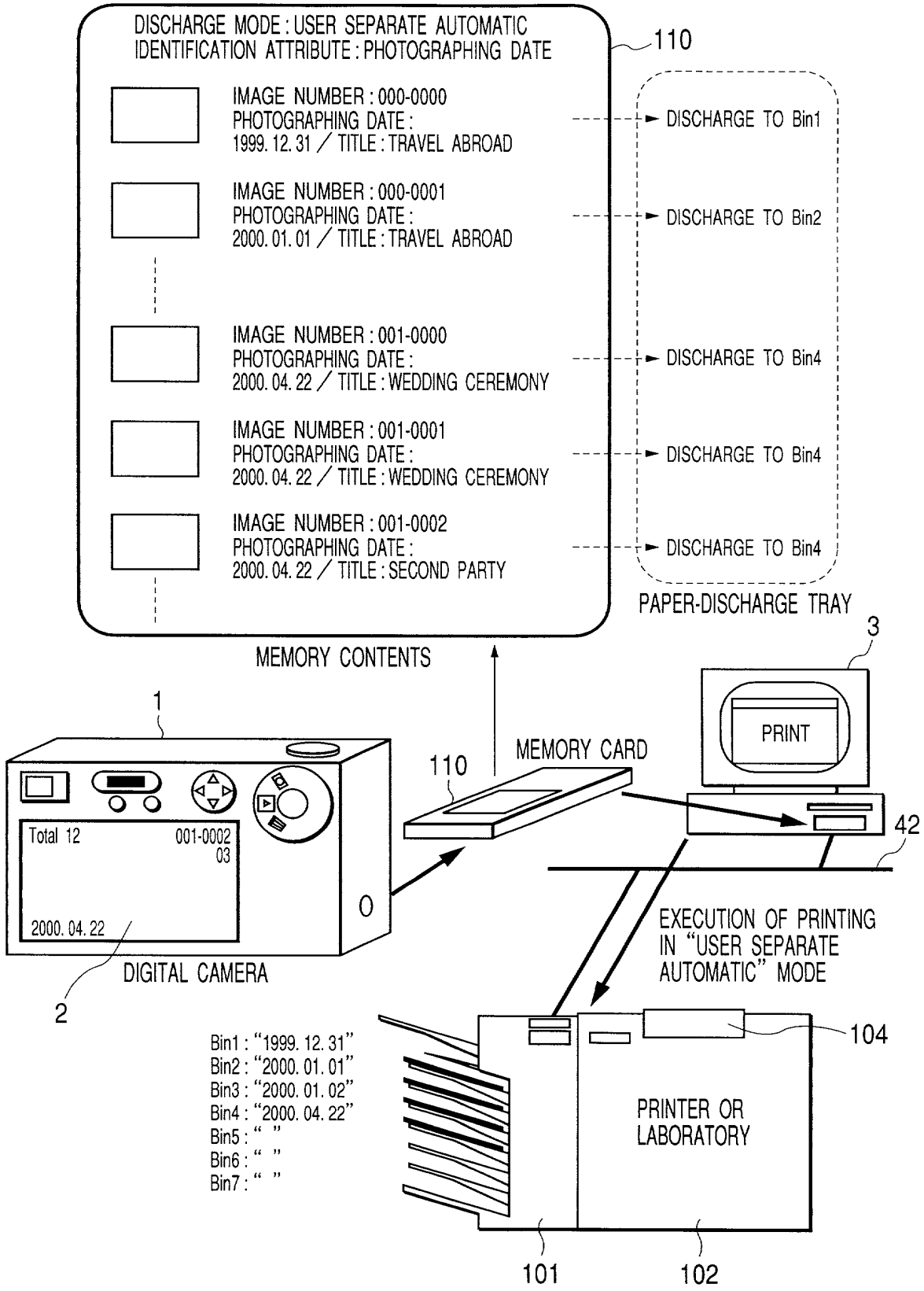

DISCHARGE MODE : USER SEPARATE AUTOMATIC
IDENTIFICATION ATTRIBUTE : PHOTOGRAPHING DATE
110
IMAGE NUMBER : 000-0000
PHOTOGRAPHING DATE :
1999. 12. 31 / TITLE : TRAVEL ABROAD
DISCHARGE TO Bin1
IMAGE NUMBER : 000-0001
PHOTOGRAPHING DATE :
2000. 01. 01 / TITLE : TRAVEL ABROAD
DISCHARGE TO Bin2
IMAGE NUMBER : 001-0000
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : WEDDING CEREMONY
DISCHARGE TO Bin4
IMAGE NUMBER : 001-0001
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : WEDDING CEREMONY
DISCHARGE TO Bin4
IMAGE NUMBER : 001-0002
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : SECOND PARTY
DISCHARGE TO Bin4
PAPER-DISCHARGE TRAY
MEMORY CONTENTS
3
PRINT
1
110
MEMORY CARD
Total 12
001-0002
03
2000. 04. 22
42
EXECUTION OF PRINTING
IN "USER SEPARATE
AUTOMATIC" MODE
DIGITAL CAMERA
2
Bin1 : "1999. 12. 31"
Bin2 : "2000. 01. 01"
Bin3 : "2000. 01. 02"
Bin4 : "2000. 04. 22"
Bin5 : " "
Bin6 : " "
Bin7 : " "
104
PRINTER OR
LABORATORY
101
102

FIG. 37

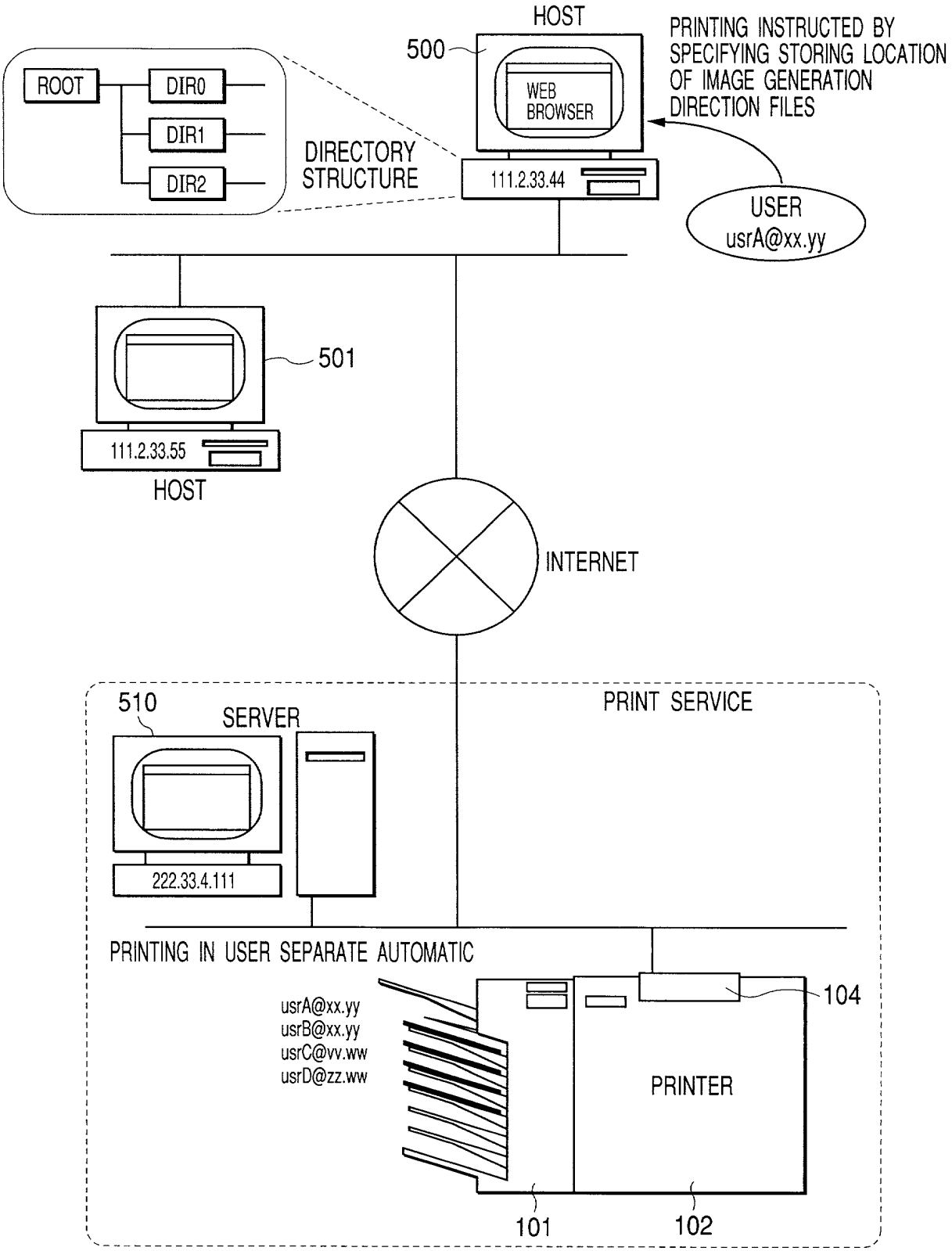

HOST
500
WEB BROWSER
PRINTING INSTRUCTED BY SPECIFYING STORING LOCATION OF IMAGE GENERATION DIRECTION FILES
ROOT
DIR0
DIR1
DIR2
DIRECTORY STRUCTURE
111.2.33.44
USER
usrA@xx.yy
501
111.2.33.55
HOST
INTERNET
510
SERVER
PRINT SERVICE
222.33.4.111
PRINTING IN USER SEPARATE AUTOMATIC
usrA@xx.yy
usrB@xx.yy
usrC@vv.ww
usrD@zz.ww
104
PRINTER
101
102

FIG. 38

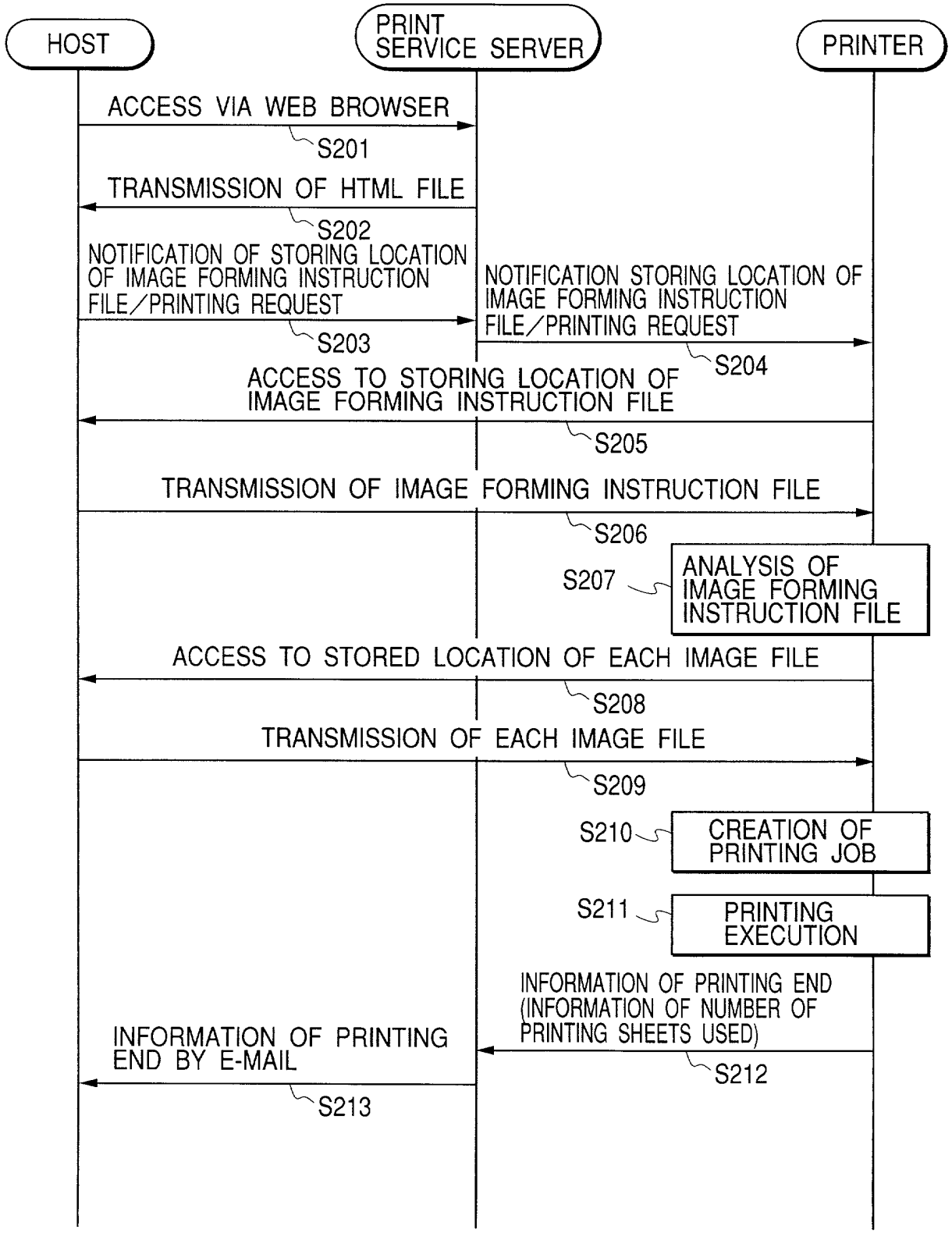

HOST
PRINT SERVICE SERVER
PRINTER
ACCESS VIA WEB BROWSER
S201
TRANSMISSION OF HTML FILE
S202
NOTIFICATION OF STORING LOCATION OF IMAGE FORMING INSTRUCTION FILE/PRINTING REQUEST
S203
NOTIFICATION STORING LOCATION OF IMAGE FORMING INSTRUCTION FILE/PRINTING REQUEST
S204
ACCESS TO STORING LOCATION OF IMAGE FORMING INSTRUCTION FILE
S205
TRANSMISSION OF IMAGE FORMING INSTRUCTION FILE
S206
S207
ANALYSIS OF IMAGE FORMING INSTRUCTION FILE
ACCESS TO STORED LOCATION OF EACH IMAGE FILE
S208
TRANSMISSION OF EACH IMAGE FILE
S209
S210
CREATION OF PRINTING JOB
S211
PRINTING EXECUTION
INFORMATION OF PRINTING END (INFORMATION OF NUMBER OF PRINTING SHEETS USED)
S212
INFORMATION OF PRINTING END BY E-MAIL
S213

FIG. 39

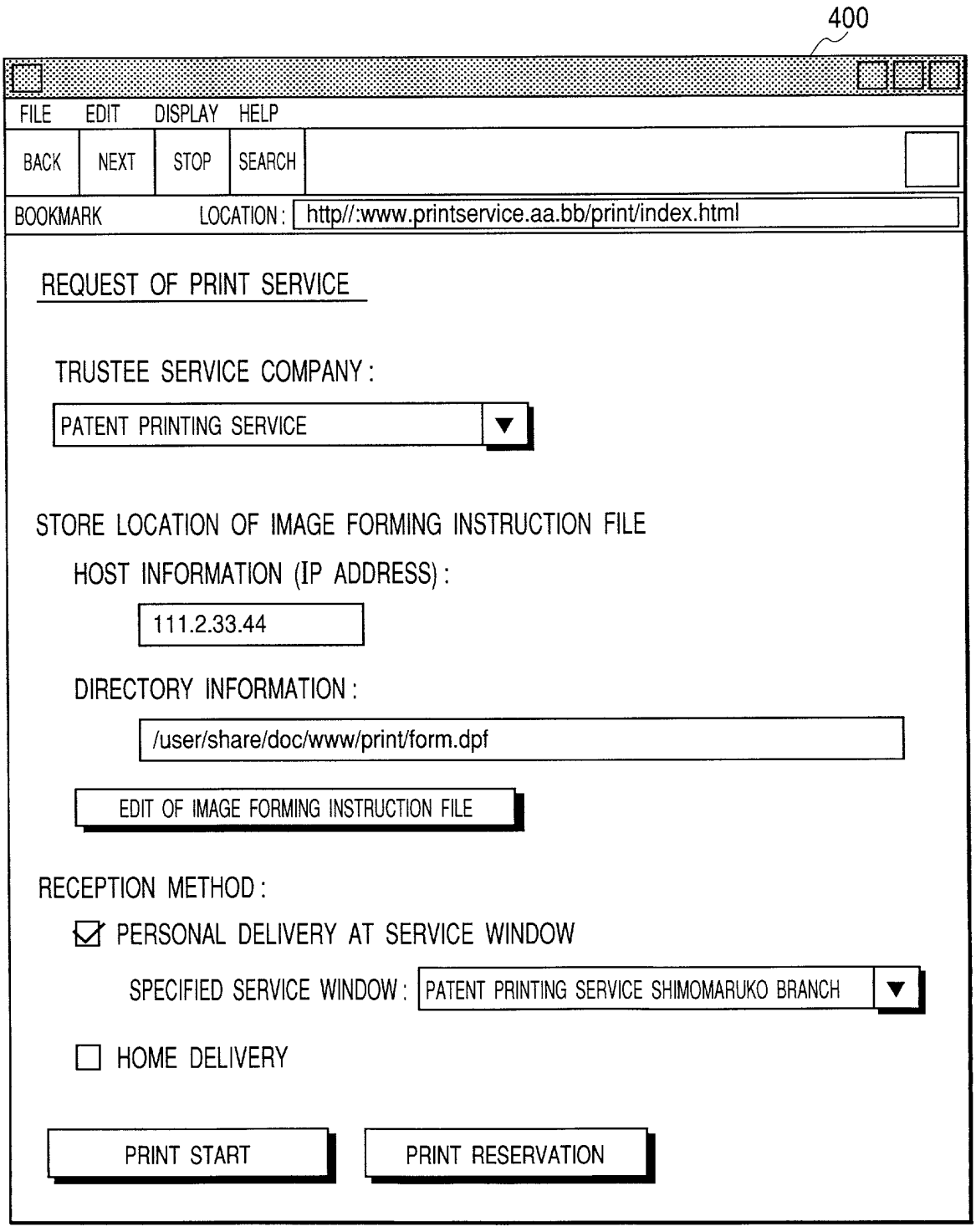
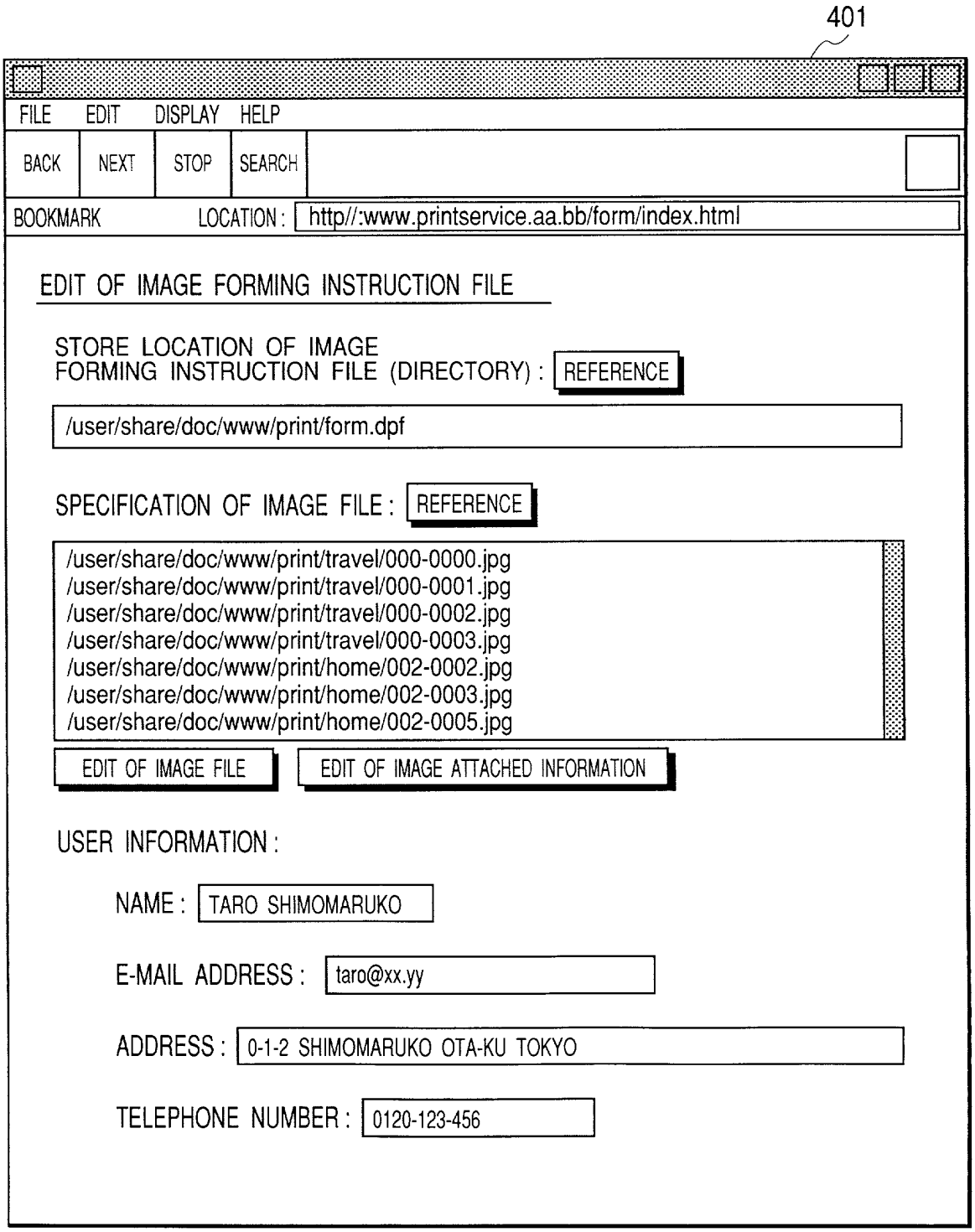

400
FILE EDIT DISPLAY HELP
BACK NEXT STOP SEARCH
BOOKMARK LOCATION: http//:www.printservice.aa.bb/print/index.html
REQUEST OF PRINT SERVICE
TRUSTEE SERVICE COMPANY:
PATENT PRINTING SERVICE
STORE LOCATION OF IMAGE FORMING INSTRUCTION FILE
HOST INFORMATION (IP ADDRESS):
111.2.33.44
DIRECTORY INFORMATION:
/user/share/doc/www/print/form.dpf
EDIT OF IMAGE FORMING INSTRUCTION FILE
RECEPTION METHOD:
PERSONAL DELIVERY AT SERVICE WINDOW
SPECIFIED SERVICE WINDOW: PATENT PRINTING SERVICE SHIMOMARUKO BRANCH
HOME DELIVERY
PRINT START
PRINT RESERVATION

FIG. 40



JP2002-245350 A 2002.08.30

FIG. 41

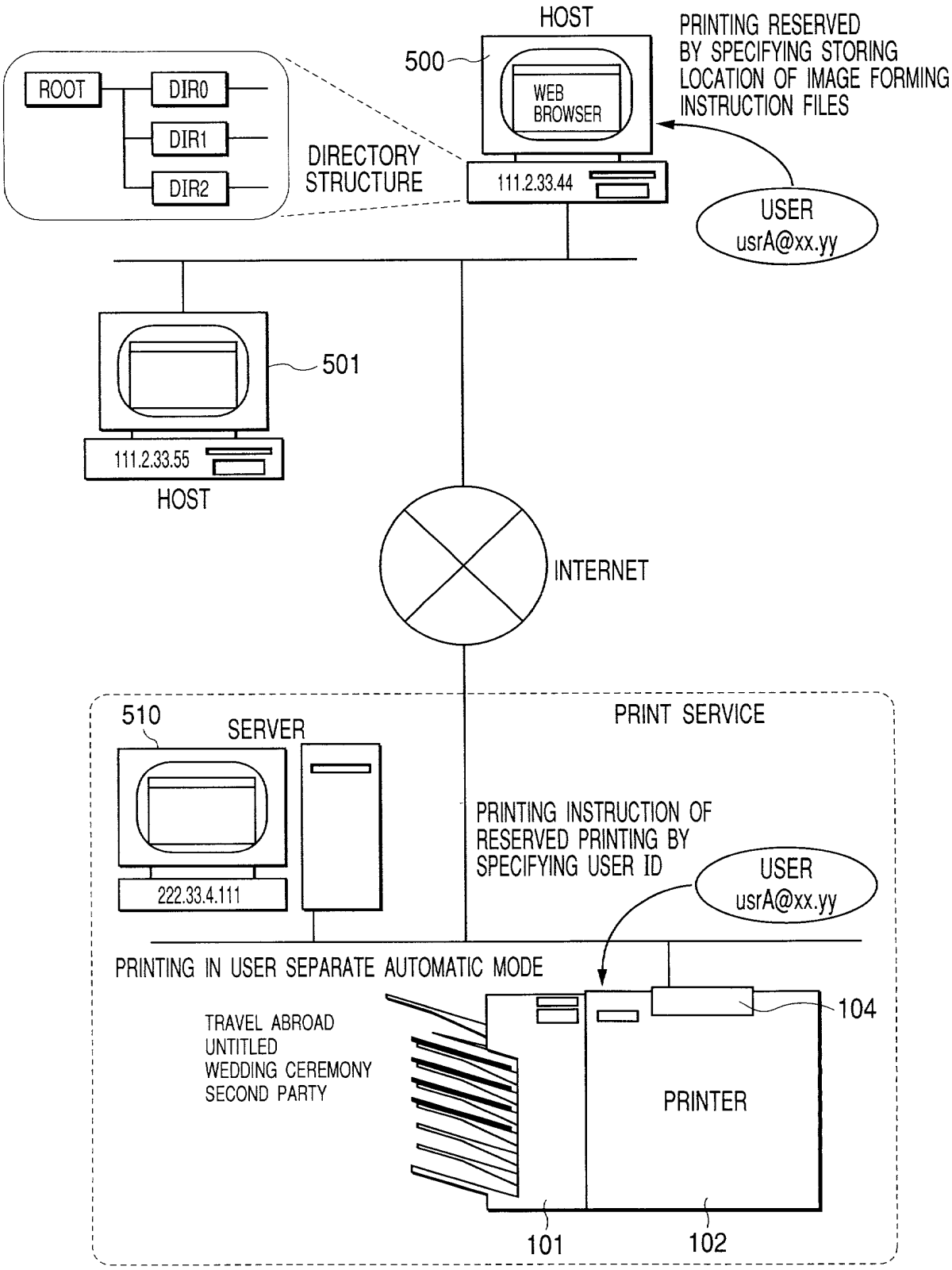

HOST
500
PRINTING RESERVED BY SPECIFYING STORING LOCATION OF IMAGE FORMING INSTRUCTION FILES
ROOT
DIR0
DIR1
DIR2
DIRECTORY STRUCTURE
WEB BROWSER
111.2.33.44
USER
usrA@xx.yy
501
111.2.33.55
HOST
INTERNET
510
SERVER
PRINT SERVICE
222.33.4.111
PRINTING INSTRUCTION OF RESERVED PRINTING BY SPECIFYING USER ID
USER
usrA@xx.yy
PRINTING IN USER SEPARATE AUTOMATIC MODE
TRAVEL ABROAD
UNTITLED
WEDDING CEREMONY
SECOND PARTY
104
PRINTER
101
102

FIG. 42

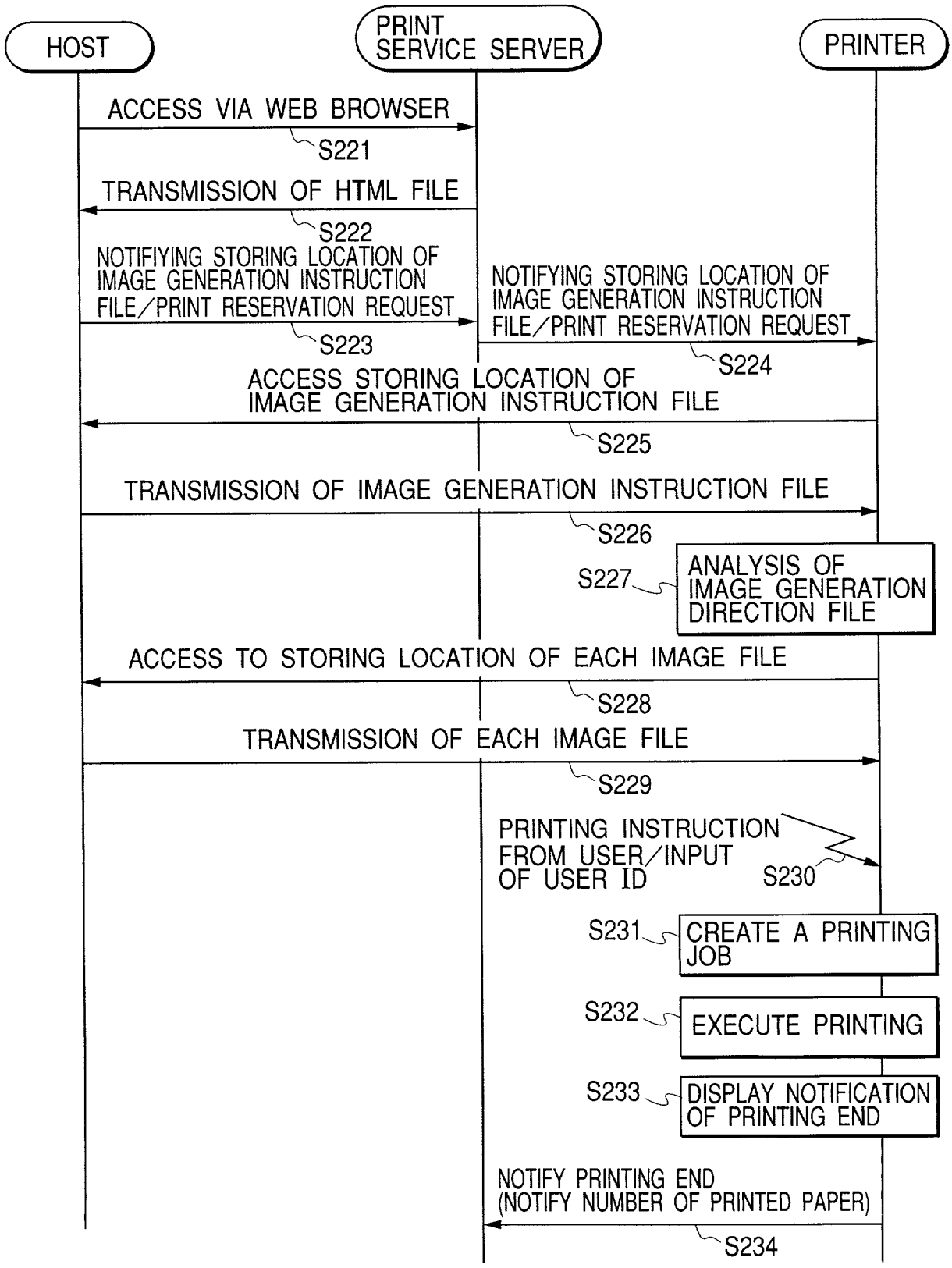

HOST
PRINT SERVICE SERVER
PRINTER
ACCESS VIA WEB BROWSER
S221
TRANSMISSION OF HTML FILE
S222
NOTIFIYING STORING LOCATION OF IMAGE GENERATION INSTRUCTION FILE/PRINT RESERVATION REQUEST
S223
NOTIFYING STORING LOCATION OF IMAGE GENERATION INSTRUCTION FILE/PRINT RESERVATION REQUEST
S224
ACCESS STORING LOCATION OF IMAGE GENERATION INSTRUCTION FILE
S225
TRANSMISSION OF IMAGE GENERATION INSTRUCTION FILE
S226
S227
ANALYSIS OF IMAGE GENERATION DIRECTION FILE
ACCESS TO STORING LOCATION OF EACH IMAGE FILE
S228
TRANSMISSION OF EACH IMAGE FILE
S229
PRINTING INSTRUCTION FROM USER/INPUT OF USER ID
S230
S231
CREATE A PRINTING JOB
S232
EXECUTE PRINTING
S233
DISPLAY NOTIFICATION OF PRINTING END
NOTIFY PRINTING END (NOTIFY NUMBER OF PRINTED PAPER)
S234

FIG. 43

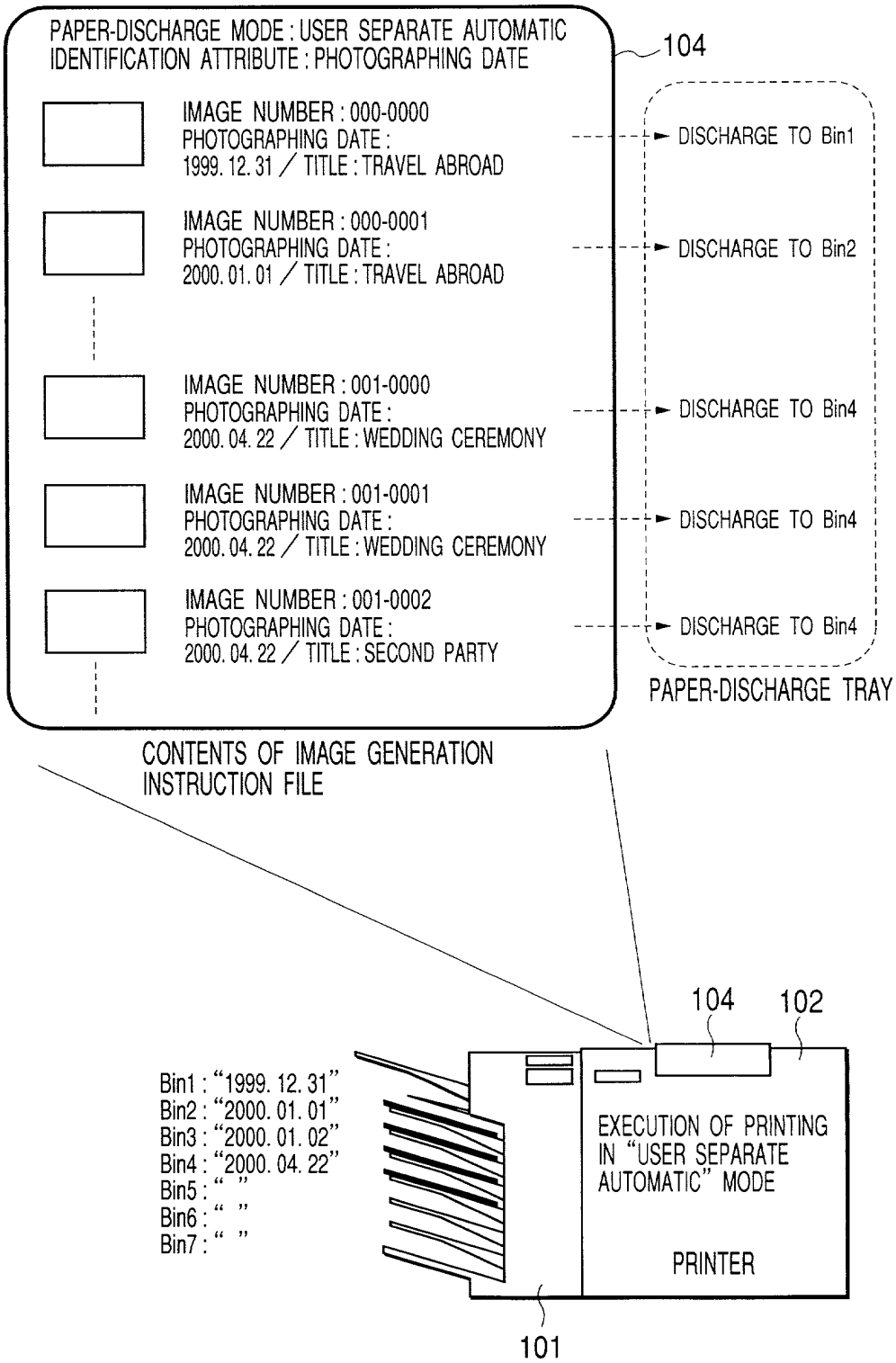

PAPER-DISCHARGE MODE : USER SEPARATE AUTOMATIC
IDENTIFICATION ATTRIBUTE : PHOTOGRAPHING DATE
104
IMAGE NUMBER : 000-0000
PHOTOGRAPHING DATE :
1999. 12. 31 / TITLE : TRAVEL ABROAD
DISCHARGE TO Bin1
IMAGE NUMBER : 000-0001
PHOTOGRAPHING DATE :
2000. 01. 01 / TITLE : TRAVEL ABROAD
DISCHARGE TO Bin2
IMAGE NUMBER : 001-0000
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : WEDDING CEREMONY
DISCHARGE TO Bin4
IMAGE NUMBER : 001-0001
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : WEDDING CEREMONY
DISCHARGE TO Bin4
IMAGE NUMBER : 001-0002
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : SECOND PARTY
DISCHARGE TO Bin4
PAPER-DISCHARGE TRAY
CONTENTS OF IMAGE GENERATION INSTRUCTION FILE
104
102
Bin1 : "1999. 12. 31"
Bin2 : "2000. 01. 01"
Bin3 : "2000. 01. 02"
Bin4 : "2000. 04. 22"
Bin5 : " "
Bin6 : " "
Bin7 : " "
EXECUTION OF PRINTING IN "USER SEPARATE AUTOMATIC" MODE
PRINTER
101

FIG. 44

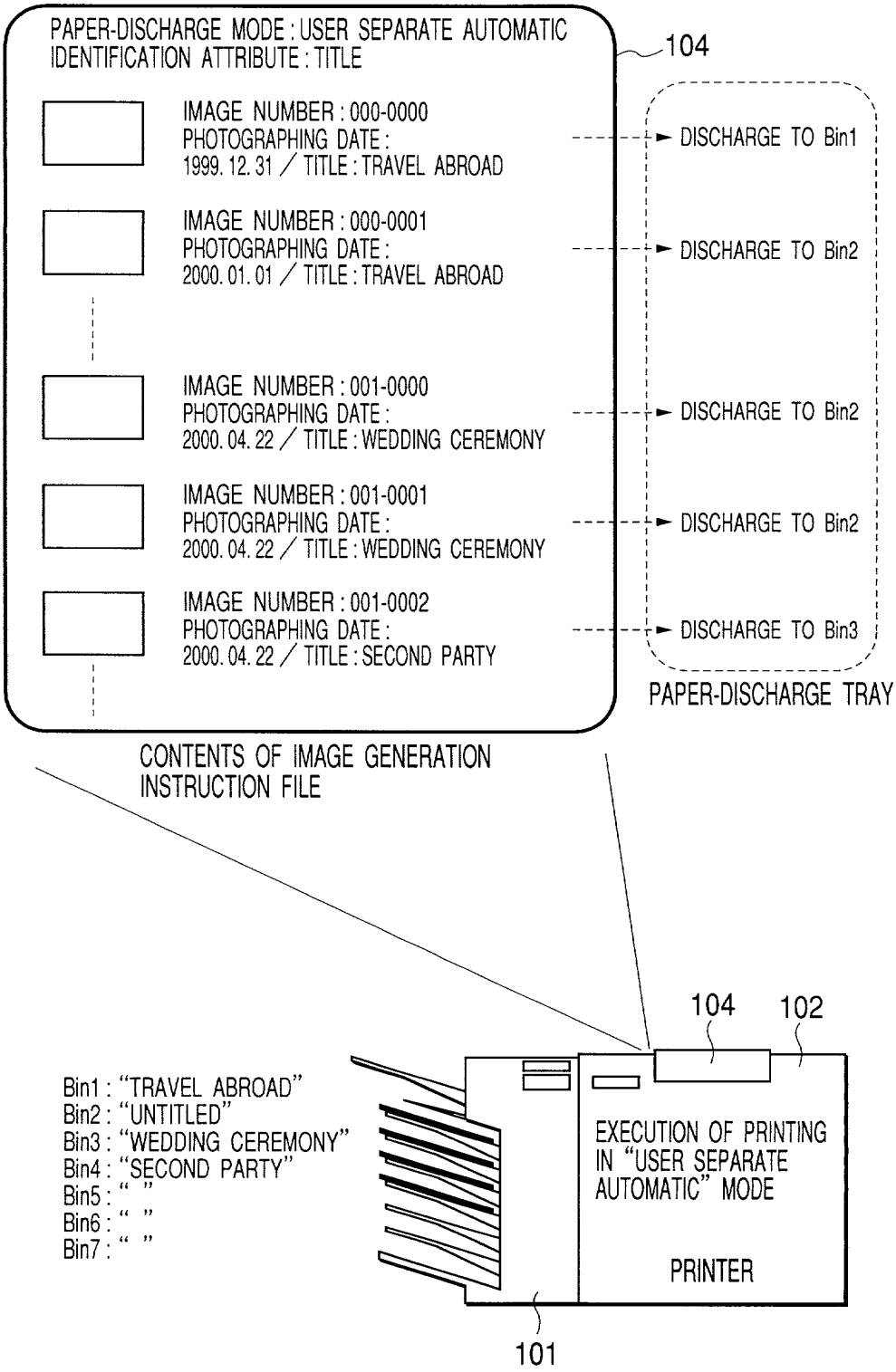

PAPER-DISCHARGE MODE : USER SEPARATE AUTOMATIC
IDENTIFICATION ATTRIBUTE : TITLE
104
IMAGE NUMBER : 000-0000
PHOTOGRAPHING DATE :
1999. 12. 31 / TITLE : TRAVEL ABROAD
DISCHARGE TO Bin1
IMAGE NUMBER : 000-0001
PHOTOGRAPHING DATE :
2000. 01. 01 / TITLE : TRAVEL ABROAD
DISCHARGE TO Bin2
IMAGE NUMBER : 001-0000
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : WEDDING CEREMONY
DISCHARGE TO Bin2
IMAGE NUMBER : 001-0001
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : WEDDING CEREMONY
DISCHARGE TO Bin2
IMAGE NUMBER : 001-0002
PHOTOGRAPHING DATE :
2000. 04. 22 / TITLE : SECOND PARTY
DISCHARGE TO Bin3
PAPER-DISCHARGE TRAY
CONTENTS OF IMAGE GENERATION INSTRUCTION FILE
104
102
Bin1 : "TRAVEL ABROAD"
Bin2 : "UNTITLED"
Bin3 : "WEDDING CEREMONY"
Bin4 : "SECOND PARTY"
Bin5 : " "
Bin6 : " "
Bin7 : " "
EXECUTION OF PRINTING IN "USER SEPARATE AUTOMATIC" MODE
PRINTER
101

FIG. 45

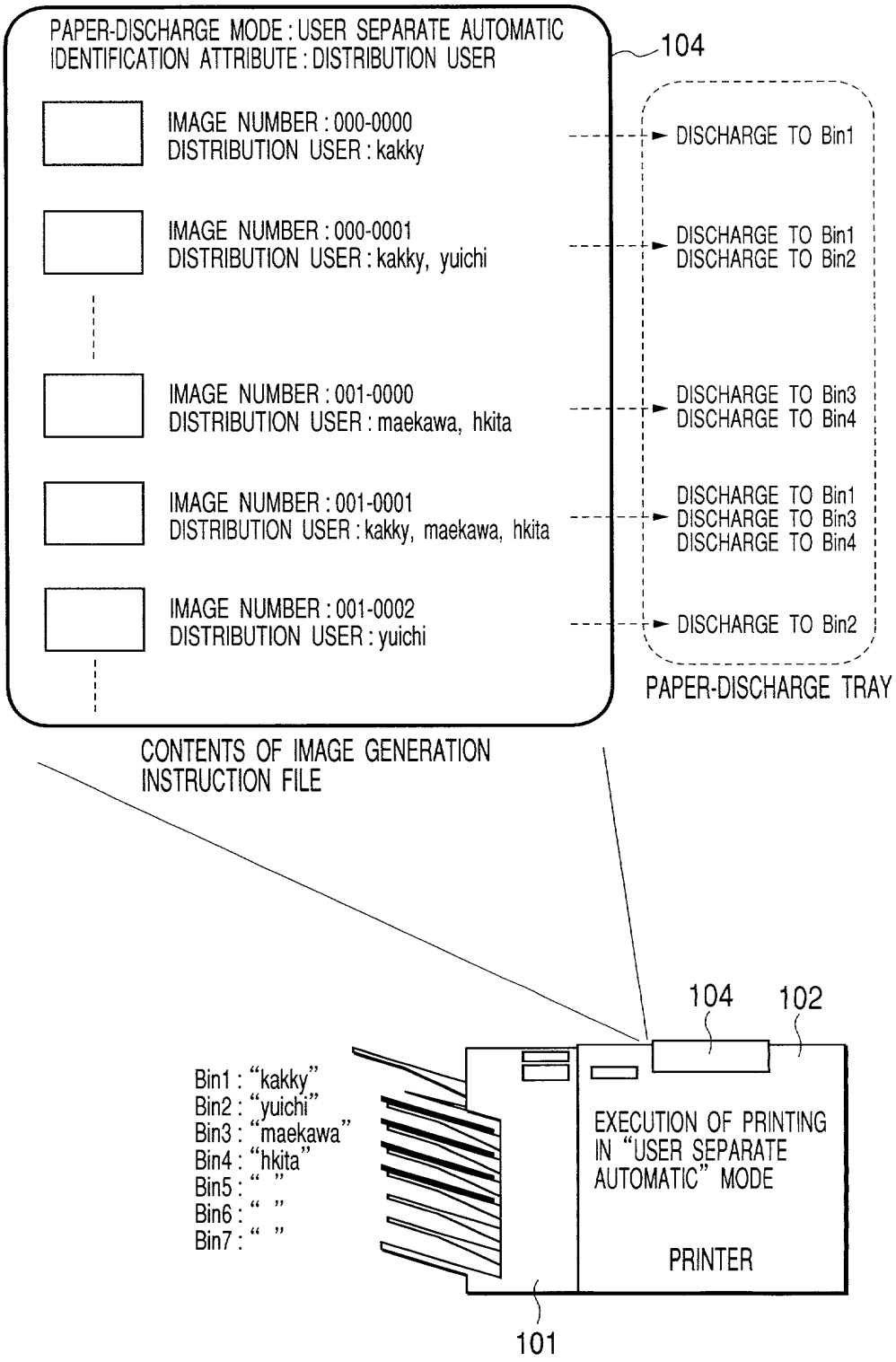

PAPER-DISCHARGE MODE : USER SEPARATE AUTOMATIC
IDENTIFICATION ATTRIBUTE : DISTRIBUTION USER
104
IMAGE NUMBER : 000-0000
DISTRIBUTION USER : kakky
DISCHARGE TO Bin1
IMAGE NUMBER : 000-0001
DISTRIBUTION USER : kakky, yuichi
DISCHARGE TO Bin1
DISCHARGE TO Bin2
IMAGE NUMBER : 001-0000
DISTRIBUTION USER : maekawa, hkita
DISCHARGE TO Bin3
DISCHARGE TO Bin4
IMAGE NUMBER : 001-0001
DISTRIBUTION USER : kakky, maekawa, hkita
DISCHARGE TO Bin1
DISCHARGE TO Bin3
DISCHARGE TO Bin4
IMAGE NUMBER : 001-0002
DISTRIBUTION USER : yuichi
DISCHARGE TO Bin2
PAPER-DISCHARGE TRAY
CONTENTS OF IMAGE GENERATION INSTRUCTION FILE
104
102
Bin1 : "kakky"
Bin2 : "yuichi"
Bin3 : "maekawa"
Bin4 : "hkita"
Bin5 : " "
Bin6 : " "
Bin7 : " "
EXECUTION OF PRINTING IN "USER SEPARATE AUTOMATIC" MODE
PRINTER
101

FIG. 46

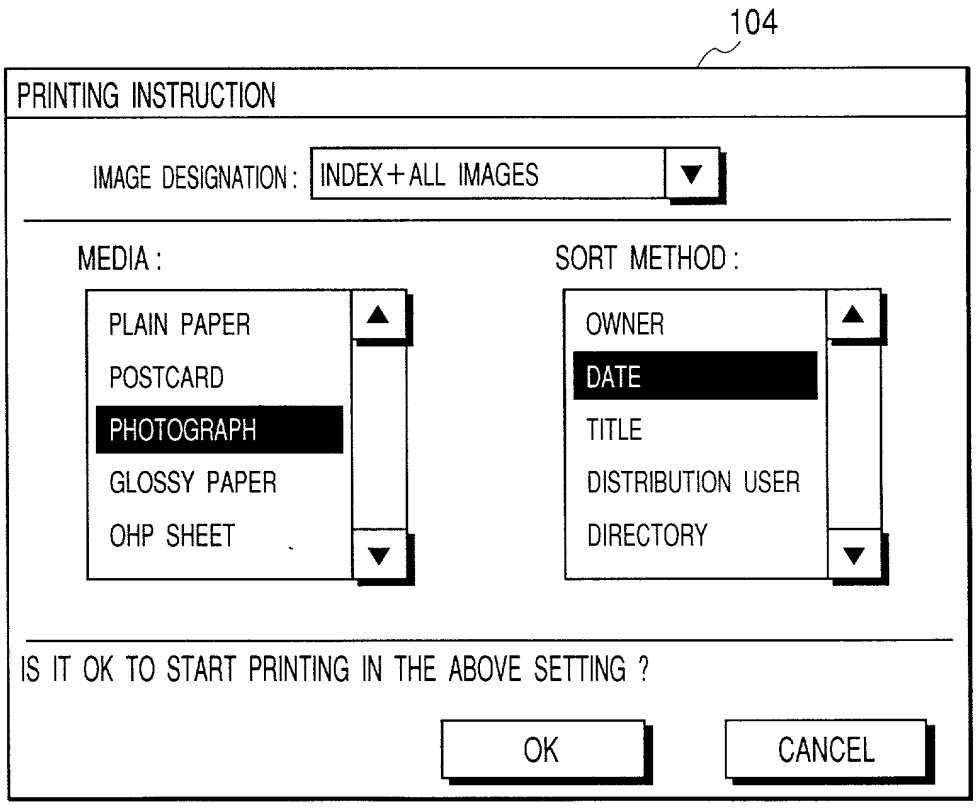

104
PRINTING INSTRUCTION
IMAGE DESIGNATION :
INDEX+ALL IMAGES
MEDIA :
PLAIN PAPER
POSTCARD
PHOTOGRAPH
GLOSSY PAPER
OHP SHEET
SORT METHOD :
OWNER
DATE
TITLE
DISTRIBUTION USER
DIRECTORY
IS IT OK TO START PRINTING IN THE ABOVE SETTING ?
OK
CANCEL

FIG. 47

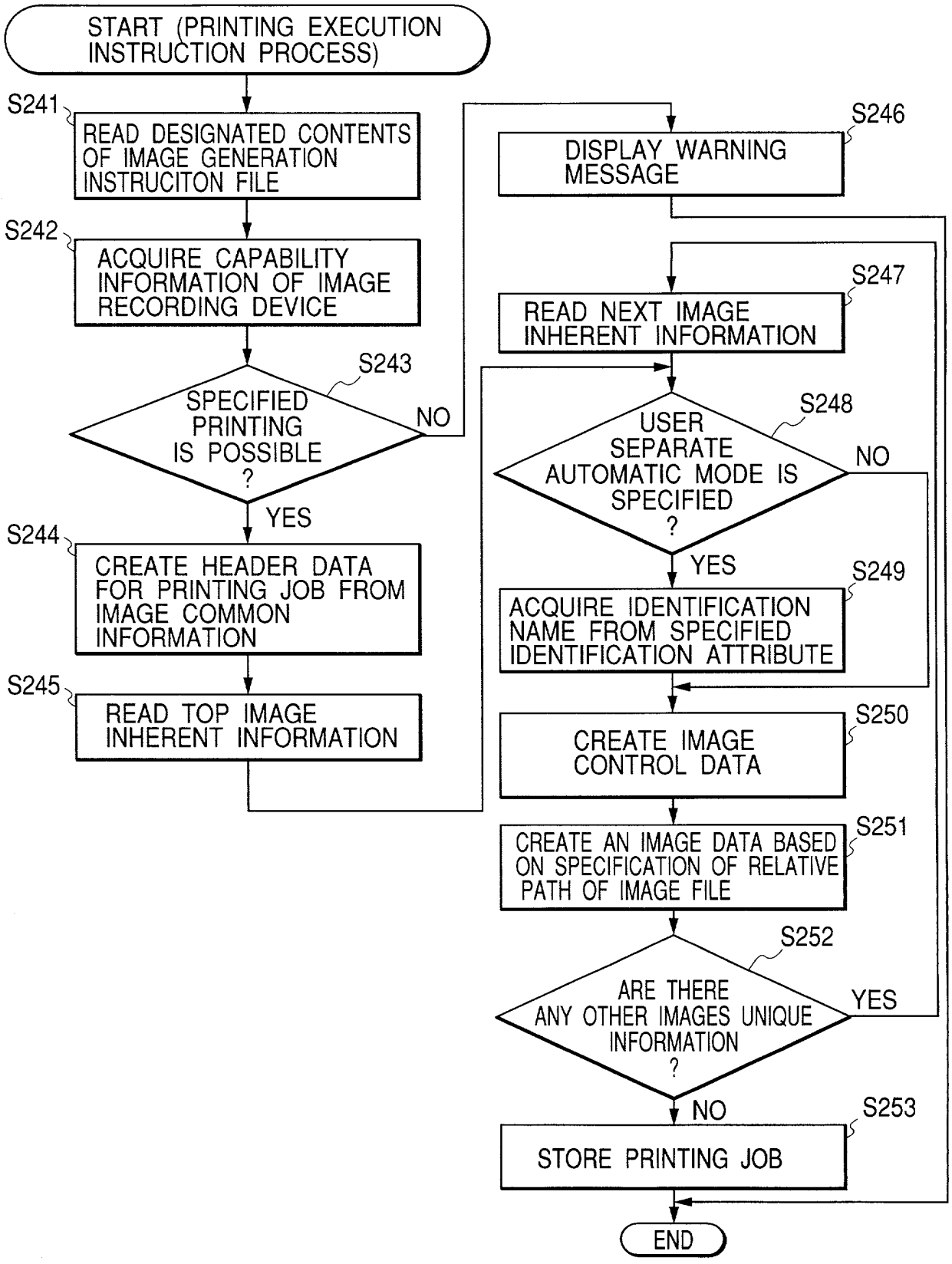

START (PRINTING EXECUTION INSTRUCTION PROCESS)
S241
READ DESIGNATED CONTENTS OF IMAGE GENERATION INSTRUCITON FILE
S242
ACQUIRE CAPABILITY INFORMATION OF IMAGE RECORDING DEVICE
S243
SPECIFIED PRINTING IS POSSIBLE ?
NO
YES
S244
CREATE HEADER DATA FOR PRINTING JOB FROM IMAGE COMMON INFORMATION
S245
READ TOP IMAGE INHERENT INFORMATION
S246
DISPLAY WARNING MESSAGE
S247
READ NEXT IMAGE INHERENT INFORMATION
S248
USER SEPARATE AUTOMATIC MODE IS SPECIFIED ?
NO
YES
S249
ACQUIRE IDENTIFICATION NAME FROM SPECIFIED IDENTIFICATION ATTRIBUTE
S250
CREATE IMAGE CONTROL DATA
S251
CREATE AN IMAGE DATA BASED ON SPECIFICATION OF RELATIVE PATH OF IMAGE FILE
S252
ARE THERE ANY OTHER IMAGES UNIQUE INFORMATION ?
YES
NO
S253
STORE PRINTING JOB
END

FIG. 48

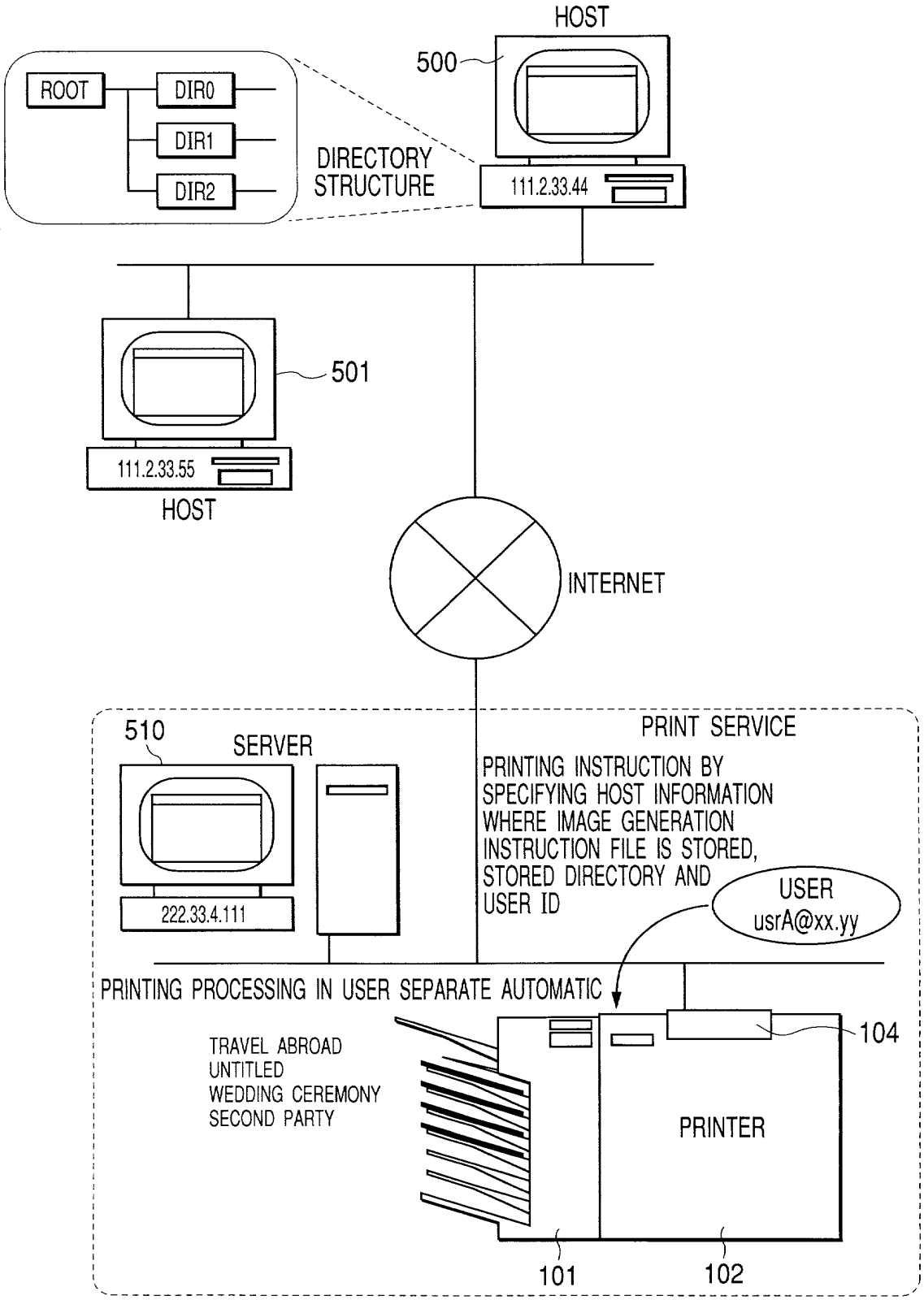

HOST
500
ROOT
DIR0
DIR1
DIR2
DIRECTORY STRUCTURE
111.2.33.44
501
111.2.33.55
HOST
INTERNET
510
SERVER
222.33.4.111
PRINT SERVICE
PRINTING INSTRUCTION BY SPECIFYING HOST INFORMATION WHERE IMAGE GENERATION INSTRUCTION FILE IS STORED, STORED DIRECTORY AND USER ID
USER
usrA@xx.yy
PRINTING PROCESSING IN USER SEPARATE AUTOMATIC
TRAVEL ABROAD
UNTITLED
WEDDING CEREMONY
SECOND PARTY
104
PRINTER
101
102

FIG. 49

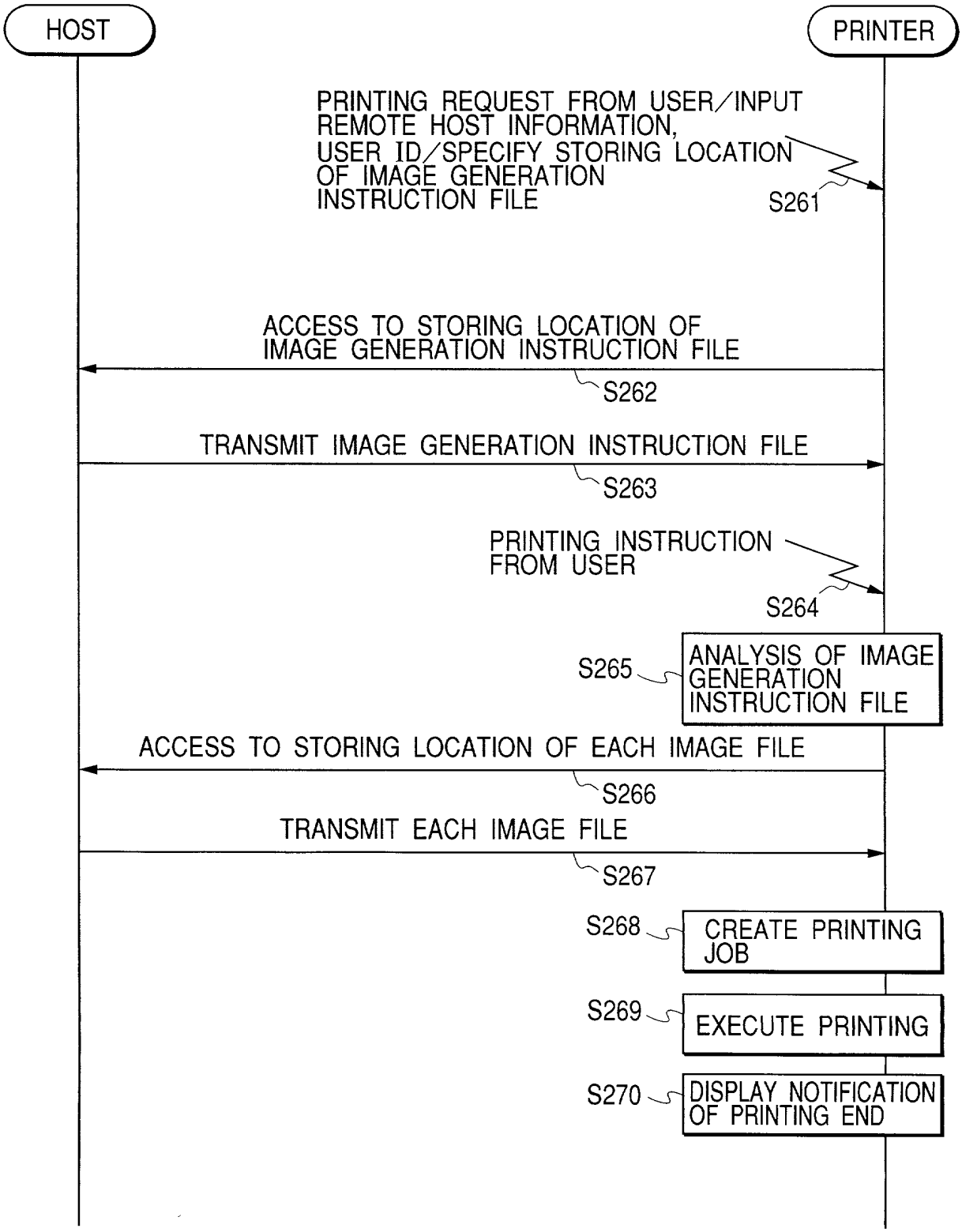

HOST
PRINTER
PRINTING REQUEST FROM USER/INPUT REMOTE HOST INFORMATION, USER ID/SPECIFY STORING LOCATION OF IMAGE GENERATION INSTRUCTION FILE
S261
ACCESS TO STORING LOCATION OF IMAGE GENERATION INSTRUCTION FILE
S262
TRANSMIT IMAGE GENERATION INSTRUCTION FILE
S263
PRINTING INSTRUCTION FROM USER
S264
S265
ANALYSIS OF IMAGE GENERATION INSTRUCTION FILE
ACCESS TO STORING LOCATION OF EACH IMAGE FILE
S266
TRANSMIT EACH IMAGE FILE
S267
S268
CREATE PRINTING JOB
S269
EXECUTE PRINTING
S270
DISPLAY NOTIFICATION OF PRINTING END

FIG. 50

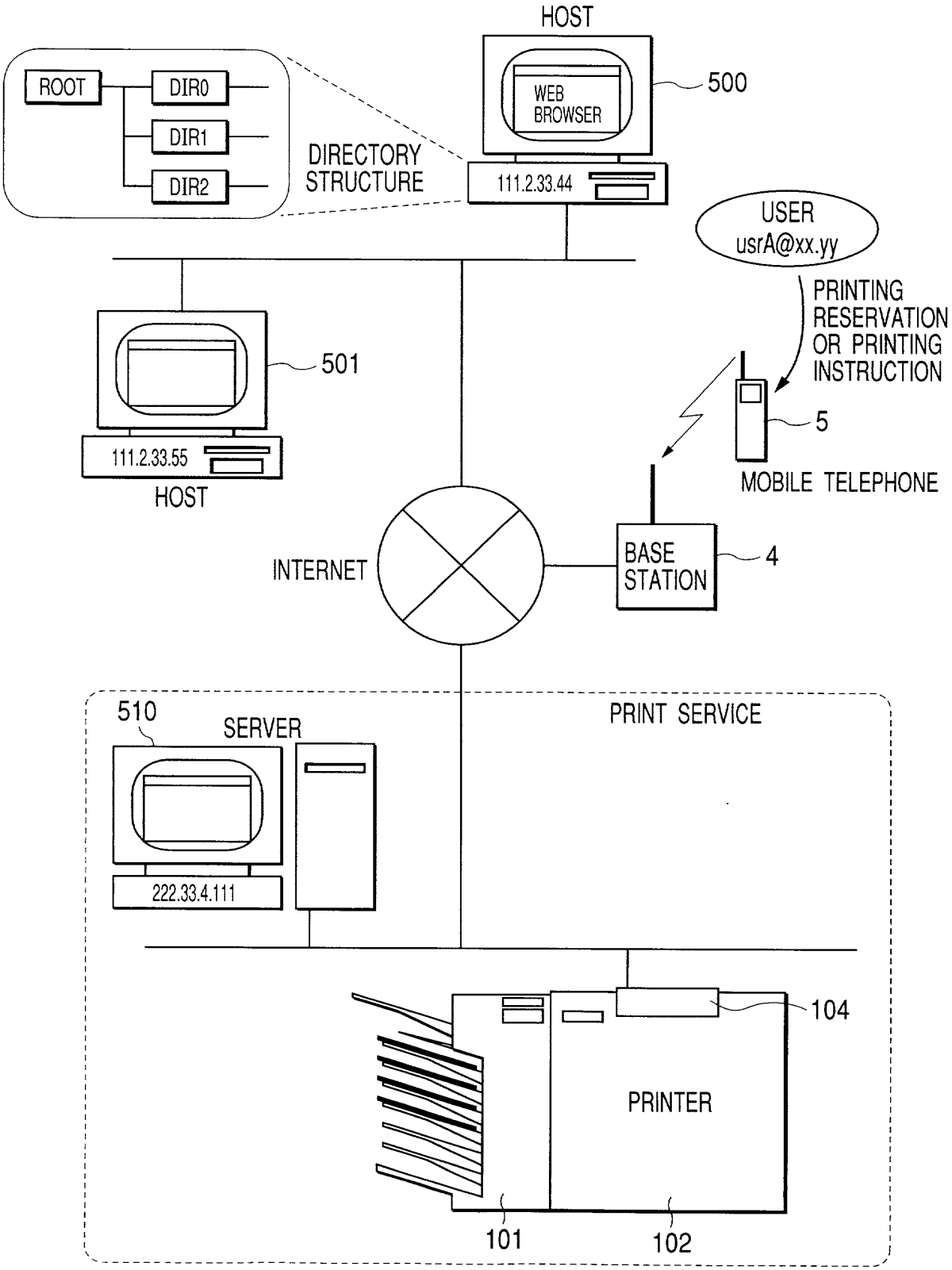

HOST
ROOT
DIR0
DIR1
DIR2
DIRECTORY STRUCTURE
WEB BROWSER
500
111.2.33.44
USER
usrA@xx.yy
PRINTING RESERVATION OR PRINTING INSTRUCTION
501
111.2.33.55
HOST
5
MOBILE TELEPHONE
INTERNET
BASE STATION
4
510
SERVER
PRINT SERVICE
222.33.4.111
104
PRINTER
101
102

FIG. 51

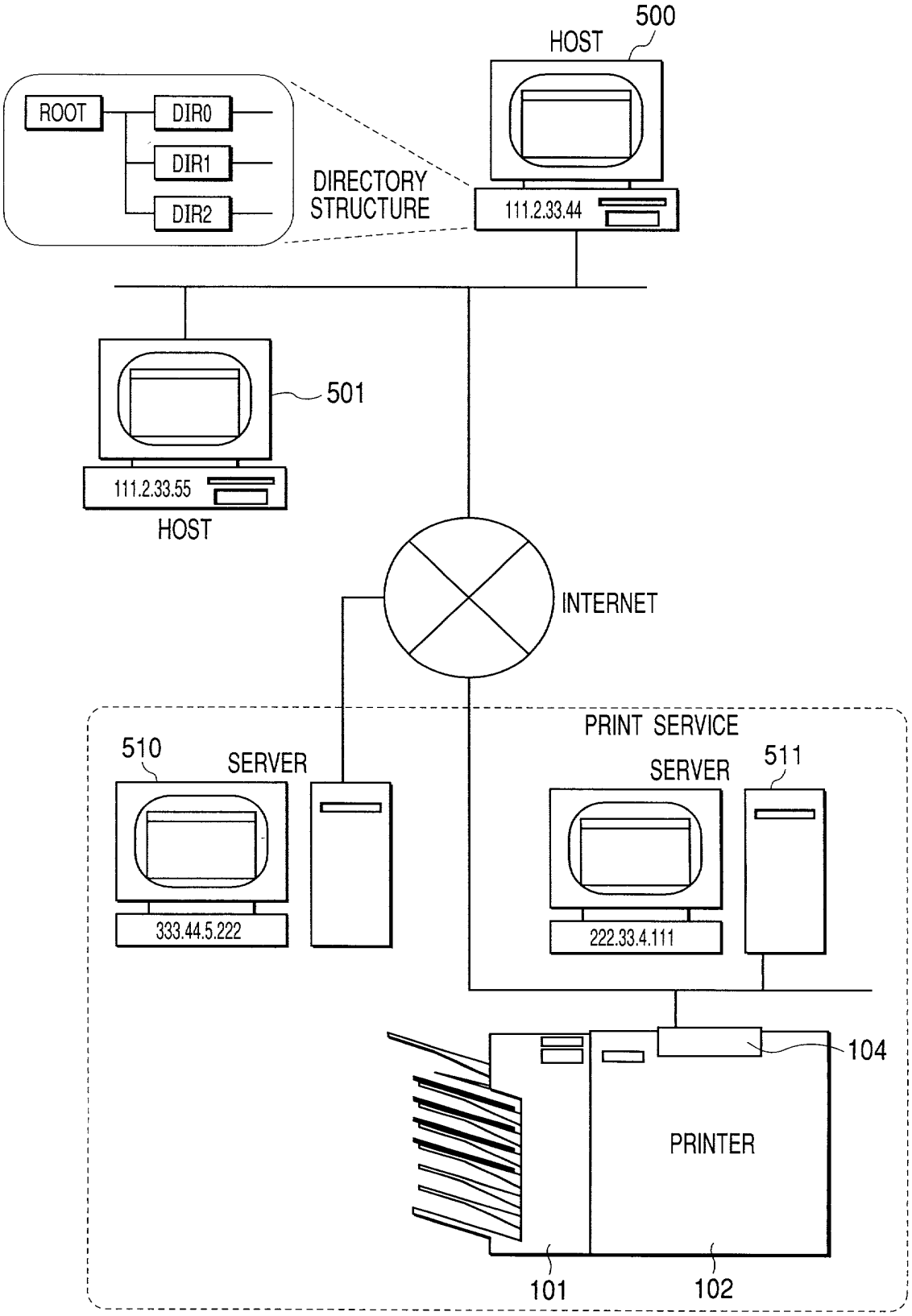

500
HOST
ROOT
DIR0
DIR1
DIR2
DIRECTORY STRUCTURE
111.2.33.44
501
111.2.33.55
HOST
INTERNET
PRINT SERVICE
510
SERVER
333.44.5.222
SERVER
511
222.33.4.111
104
PRINTER
101
102

FIG. 52

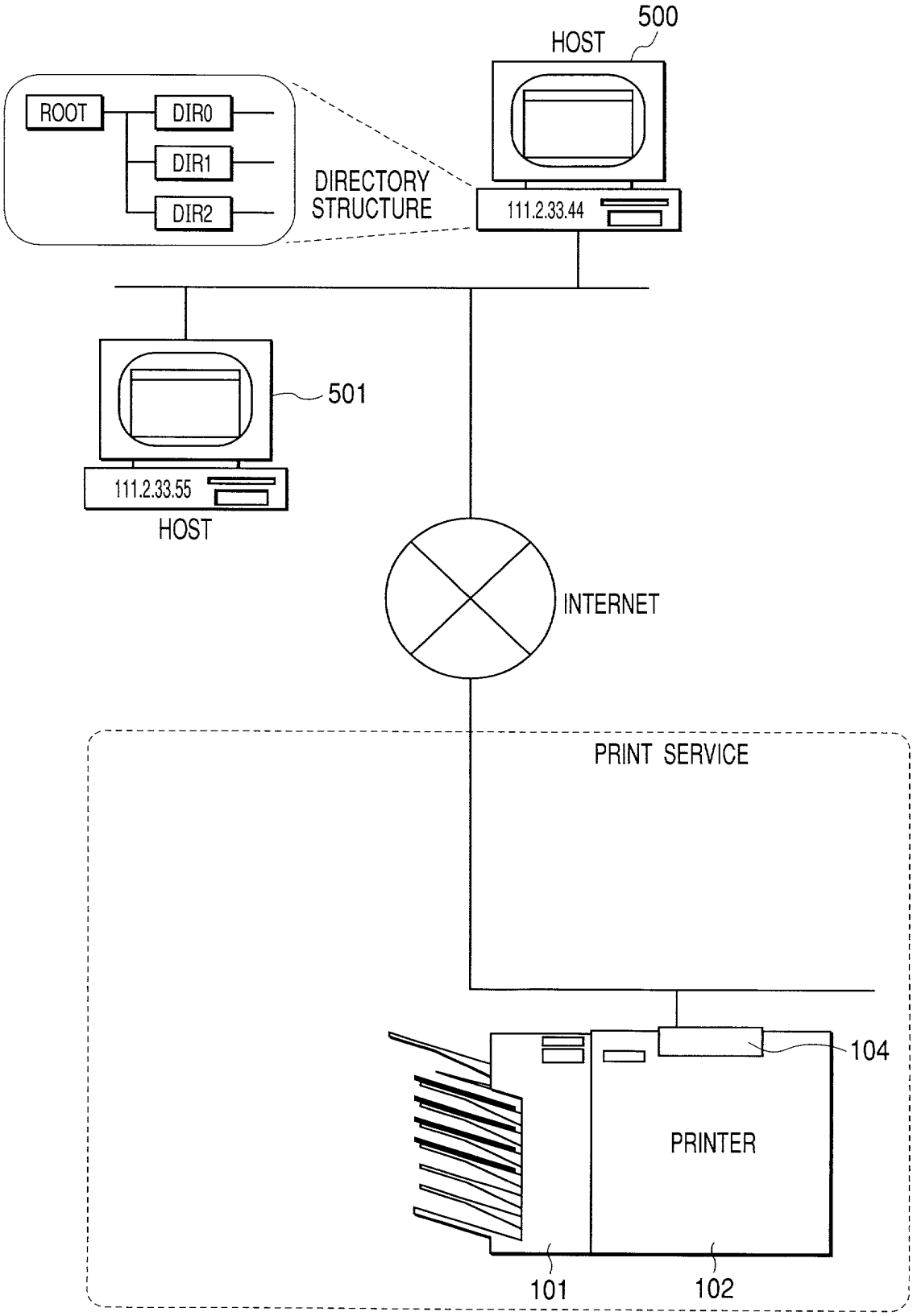

500
HOST
ROOT
DIR0
DIR1
DIR2
DIRECTORY STRUCTURE
111.2.33.44
501
111.2.33.55
HOST
INTERNET
PRINT SERVICE
104
PRINTER
101
102

FIG. 53A

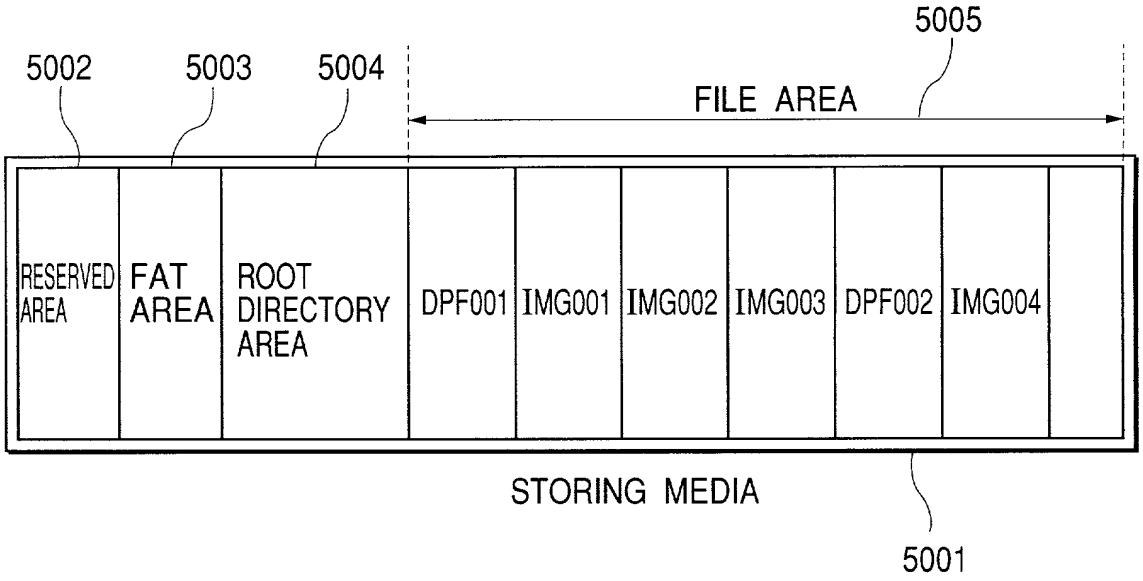


FIG. 53B

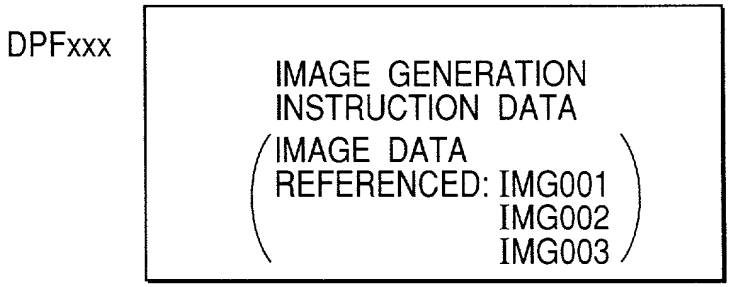
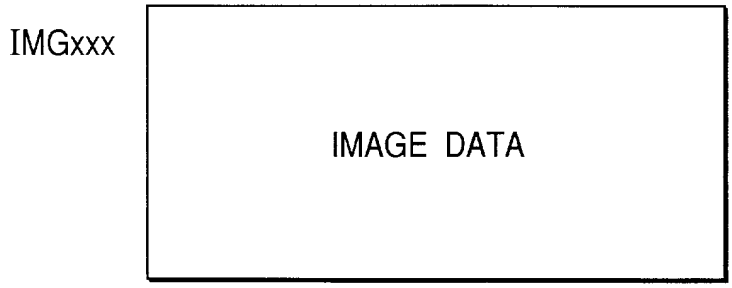
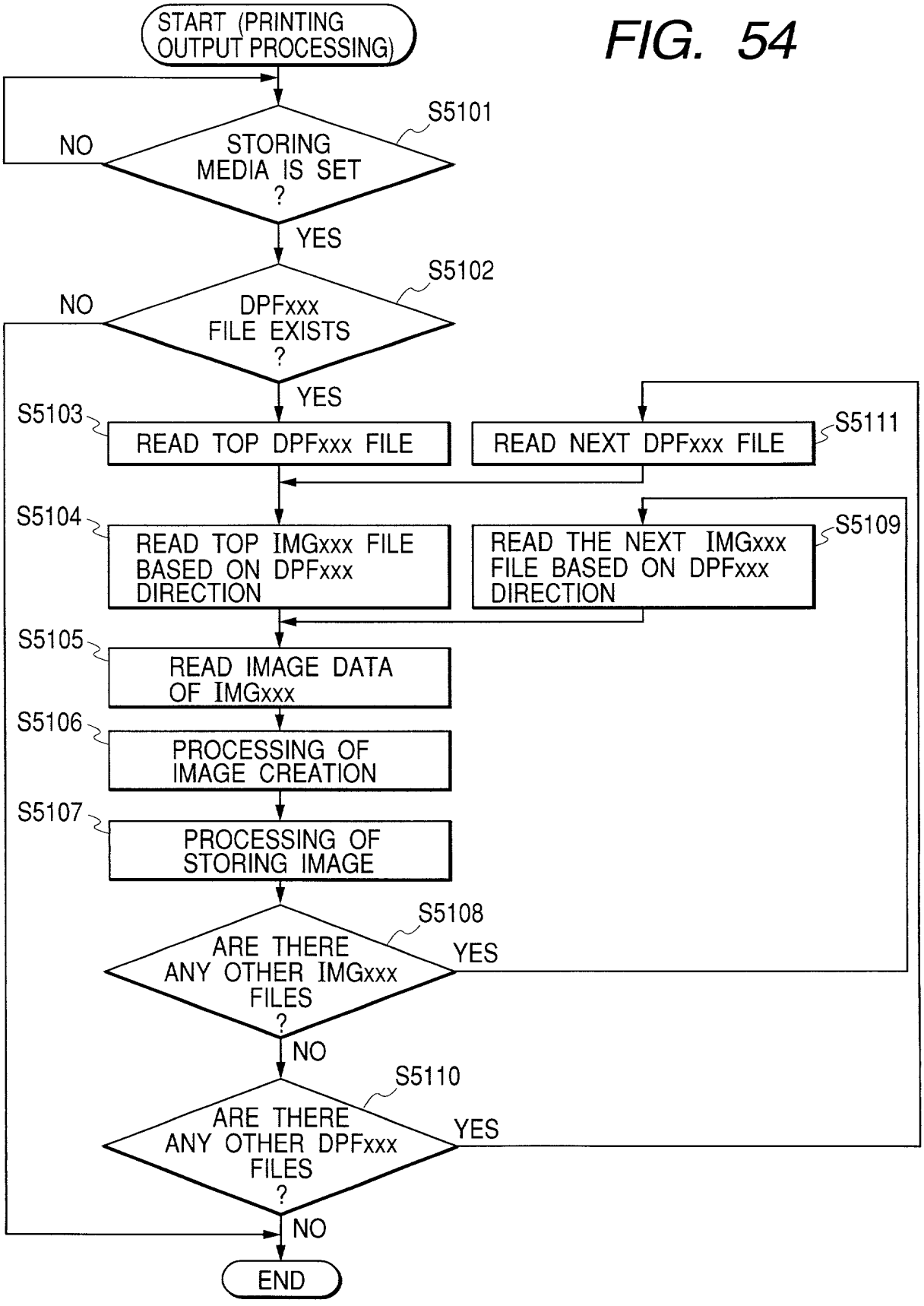


FIG. 53C



JP2004-265396 A 2004.9.24

FIG. 54


START (PRINTING OUTPUT PROCESSING)
S5101
STORING MEDIA IS SET ?
NO
YES
S5102
DPFxxx FILE EXISTS ?
NO
YES
S5103
READ TOP DPFxxx FILE
S5111
READ NEXT DPFxxx FILE
S5104
READ TOP IMGxxx FILE BASED ON DPFxxx DIRECTION
S5109
READ THE NEXT IMGxxx FILE BASED ON DPFxxx DIRECTION
S5105
READ IMAGE DATA OF IMGxxx
S5106
PROCESSING OF IMAGE CREATION
S5107
PROCESSING OF STORING IMAGE
S5108
ARE THERE ANY OTHER IMGxxx FILES ?
YES
NO
S5110
ARE THERE ANY OTHER DPFxxx FILES ?
YES
NO
END